IMPERIAL ETHIOPIAN GOVERNMENT

Ethiopia. Planning board.

# SECOND FIVE YEAR DEVELOPMENT PLAN

## 1955-1959 E.C.

(DRAFT)

BANK FOR RECONSTRUCTION AND

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# CONTENTS

Chapter/Pages

0. Foreword . . . . . . . . . . . . . . . . . . . . . . . 0/1 - 3
1. Objectives of Planning for Economic and Social Development. . . . . . . . . . . . . . . . . . . . . 1/1 - 4
2. Development During the First Five Year Plan . . 2/1 - 13
3. Long-term Economic Development . . . . . . . . . . 3/1 - 10
4. The Second Five Year Plan in Outline . . . . . . 4/1 - 21
5. Finance . . . . . . . . . . . . . . . . . . . . . . 5/1 - 11
6. Agriculture. . . . . . . . . . . . . . . . . . . . 6/1 - 29
7. Forestry . . . . . . . . . . . . . . . . . . . . . 7/1 - 4
8. Fishing and Hunting. . . . . . . . . . . . . . . . 8/1 - 2
9. Mining . . . . . . . . . . . . . . . . . . . . . . 9/1 - 8
10. Electricity. . . . . . . . . . . . . . . . . . . 10/1 - 10
11. Manufacturing Industry . . . . . . . . . . . . . 11/1 - 20
12. Building and Construction. . . . . . . . . . . . 12/1 - 6
13. Handicraft and Cottage Industry. . . . . . . . . 13/1 - 3
14. Transport and Communications . . . . . . . . . . 14/1 - 14
15. Trade, Catering and Tourism. . . . . . . . . . . 15/1 - 6
16. Foreign Trade and Balance of Payments. . . . . . 16/1 - 12
17. Education and Culture. . . . . . . . . . . . . . 17/1 - 14
18. Public Health. . . . . . . . . . . . . . . . . . 18/1 - 8
19. Employment . . . . . . . . . . . . . . . . . . . 19/1 - 8
20. Social Welfare . . . . . . . . . . . . . . . . . 20/1 - 6
21. Community Development Program . . . . . . . . . . 21/1 - 10
22. Regional Development . . . . . . . . . . . . . . 22/1 - 3
23. Policy and Measures . . . . . . . . . . . . . . 23/1 - 13
24. Administration and Organization. . . . . . . . . 24/1 - 5
25. Science and Research . . . . . . . . . . . . . . 25/1 - 10

91 2)/74

# FOREWORD

1. This document presents the proposals for the Second Five Year Plan of economic and social development for Ethiopia in the period 1955-1959 (E.C.). Its main features are determined by the directives and suggestions of the Imperial Planning Board, headed by His Imperial Majesty, Haile Selassie I, and particularly by the following long-term objectives set before the Nation:

a) to increase the productive capacity of the national economy, in order to secure an abundant diversified production of goods and services, and to accelerate the rate of economic growth by a better utilization of the available resources, with the aim of diminishing the discrepancy which exists between Ethiopia and industrialized countries;

b) to raise the saving potential of the country by speeding up the growth of saving in absolute and relative terms, with the view to attaining a self-sustained economic growth as soon as possible;

c) to improve the living conditions, and to raise the standard of living of the population according to the growing economic possibilities, and by a steady and continuous development of economy;

d) to provide the Nation with better social services, particularly education, public health, social security and cultural services, so as to affirm and strengthen the personality and integrity of the Ethiopians;

e) to change the pattern of technology by introducing modern machinery and equipment in all economic activities, and by raising the skill and productivity of labor;

f) to offer all the citizens an equal opportunity to contribute to the economic and social progress of the country;

g) to create a sound economic basis for National Defense and security, with the purpose of ensuring a peaceful development of the Nation, and contributing to world peace and progress.

2. The preparation of this document started in the Planning Office in the middle of 1961 with appropriate research work and evaluation of recent trends, and of all the development processes which were opened during the First Five Year Plan. In its further stages this elaboration was extended by including into the work all the Government Ministries, Agencies and a large number of institutions which have prepared the sectorial projects and relevant analyses. The entire work was followed up, supervised, and guided by the Imperial Planning Board Committee in accordance with directives of the Imperial Planning Board and was supervised by five Standing Preparatory Committees, which have examined, discussed, and proposed all the development goals to be achieved, as well as the proper implementation of the planned targets.

3. In order to ensure the essential uniformity of these united efforts in all the stages of planning, the following standards have been accepted for the elaboration of the Second Five Year Plan:

(i) All the National Income computations have been made on the basis of the international methodology recommended by the Statistical Office of the United Nations.

(ii) With the purpose of ensuring the integration and balancing of the sectorial projects, i.e., of the projects of development of different branches of the country's economic and social activity, the Planning Office has prepared a temporary Standard Classification of All Economic Activities, which is adapted to present Ethiopian conditions. On the basis of this Classification, as well as of the Planning Methodology which is being worked out in the same Office, and which sets an appropriate planning procedure and a uniform system of planning forms and elaborating tables, the development programs of different Ministries and Agencies were uniformly elaborated and built up.

(iii) With the aim of avoiding price fluctuations in the presentation of real changes in different sectors of the country's economic and social activity, the value terms of the sectorial projects, and of the Plan as a whole, had to be expressed in constant prices. Since the First Five Year Plan was stated in prices prevalant in 1956 (G.C.), it was to be expected that it would be advantageous for the Second Five Year Plan to use the same prices. However, technical reasons did not allow such procedure, and for the projections of all the aggregates, which had to be expressed in value terms, prices of 1961 (G.C.) had to be used. Current prices were used only in analyses of current movemehts, for instance in the analyses of the terms of trade, where it was necessary to take into account the influence of price variations in the national economy.

(iv) For those products or services which for the time being do not appear on the market, or appear on it only partly, corresponding prices of those or similar products or services having a definite market price have been used. The largest use of such imputed values took place in estimations of agricultural production and of housing.

(v) There are two calendars in current use in Ethiopia: the year beginning with January 1st (Gregorian Calendar), and the year beginning with the 1st of Maskaram (Ethiopian Calendar), i.e. September 11th. Since the Imperial Planning Board has decided that the First Five Year Plan terminates with the Budgetary Year 1954 (E.C.) the Second Five Year Plan period had to begin in the following month or months, which automatically excluded the use of the Gregorian Year as the Planning Year. The fact that there is no big difference between these two years, and that the annual plans are closely linked with the annual budgets and their execution, has been taken as the argument for accepting the Budgetary Year as the Planning Year.

(vi) Accordingly, the Second Five Year Plan Period begins on 1st Hamle 1955 (= July 7, 1962 G.C.) and terminates on 30th Sene 1959 (= July 6, 1967 G.C.). The year for comparison purposes, which is always the year preceding the planning period, is the Budgetary Year 1954 (or the Ethiopian year 1954, if the data cannot be rearranged and adapted to the Budgetary year).

4. The collection and compilation of the relevant statistical data presented a serious difficulty in the elaboration of the Second Five Year Plan. Planning demands a well-organized statistical service and a uniform statistical system, based on uniform statistical standards, which provides a homogeneity of records and a consistency and comparability of data in all aspects. However, since the statistical service in Ethiopia is not yet completely organized, certain data had to be based on estimates. Thus, for instance, the number of inhabitants has been based upon the estimate which had been made for the First Five Year Plan. This estimate fits within the limits of various estimates carried out subsequently by different institutions. In order to obtain data on agricultural production all the existing sources of data pertaining to agriculture have been submitted to subsequent investigation. A special commission of experts checked the existing data by applying various methods, mostly by assessing the amount of production on the basis of the probable per capita consumption of a particular agricultural product, by making use of data on the expenditure of agricultural raw materials in industry, and of data on the export of agricultural products, as well as varied research carried out in individual regions or of particular agricultural crops. For animal husbandry data, the number of species of livestock quoted in the First Five Year Plan has been taken as a basis, because no other more reliable data were available. By consulting experts from the Ministry of Agriculture, FAO, etc., norms on the livestock turnover have been worked out (fertility, losses , slaughtering, average-weight, and dressing weight). On the basis of these norms the movement of the number of livestock and the height of livestock production have been calculated. For determining the national income, there have been available some relatively reliable data on economic and social activities, for which there exists an organized statistical service. Meanwhile, to determine the national income from agriculture, handicrafts, and trade, data derived from the aforesaid estimates of production, populations, employment, and turnover have been used as a basis. Naturally all these estimates may contain a certain margin of error, but it has to be pointed out that, though certain figures may not be correct in their absolute terms, the order of magnitudes and the trends shown are sound.

Addis Ababa, Nehase, 1954 (E.C.)

## Chapter 1

## OBJECTIVES OF PLANNING FOR ECONOMIC AND SOCIAL DEVELOPMENT

1. Inspired by the farsightedness of His Imperial Majesty Haile Selassie I, the Five Year Development Plan 1957-1961 (G.C.) was introduced as the first document of the overall economic and social policy of Ethiopia. By this, Ethiopia became the first African country to commence comprehensive planning for her economic and social development. The introduction of planning was undoubtedly a very progressive step with far reaching consequences. It was based on the conviction that progress could be accelerated only by planning, i.e. by a proper selection of targets and rational utilization of the available resources. The old, spontaneous way of growth was not acceptable to Ethiopia, particularly in conditions of modern technology and contemporary life, and planning for economic and social development was accepted as the only scientific method for formulating the policy, and the most efficient means of its implementation.

2. By adopting planning, the Government showed its firm decision to speed up the socio-economic development processes, and to shorten the time needed for raising the economy and society to a higher level. From the historical point of view, the introduction of planning in Ethiopia was one of the many national undertakings which have been carried out over decades with the aim of modernizing all aspects of life and human activity. It is also a very significant undertaking, for only by planning can national objectives be determined, their priorities assessed, and resources allocated.

3. Within the framework of a long and heroic history, full of struggles for independence, freedom and human rights, the modern economic and social development of Ethiopia is a recent factor. It took place particularly after the Liberation and during the First Five Year Plan period, when new institutions and economic activities were started. However, due to the fact that the economic and social development originated from a traditional basis, it could not accelerate to such an extent as to achieve self-sustained economic growth. Conceived as an integrated part of a long-term development, the recent economic and social progress is a sound and promising beginning to a better future.

4. As in other developing countries, planning for economic and social progress in Ethiopia should eradicate poverty, disease, illiteracy and ignorance. It should increase national production, productivity of labor, and wealth, emphasize education, as well as the cultural values, and raise the standard of living of the people. In fact, developmental planning has to overcome the poor heritage of the past and to bring prospective innovations and improvement. The period which Ethiopia is undergoing at present is of a transitory nature, since it comprises its own traditional patterns of econo-

mic and social life, as well as the new ones. This is why the path of development together with the planning approach and techniques should be such as to reflect fully the Ethiopian traits which link together the national traditions and the scientific, cultural, and technological achievements of the modern world.

5. Ethiopia's future economic and social development is a challenge not only to the Nation, but also of a great international significance. Owing to her heroic history and present international position, Ethiopia's role in the modern world is much more important than her size and economic power, so that economic and social development is not purely an internal matter, but is also a subject of international and particularly African interest. National development should strengthen African and international integration; national experiences in planning have to be exchanged with other nations, so as to facilitate the economic and social development. This is actually one of the features of contemporary international co-operation, where each nation by its own development contributes to the general progress.

6. The Development Plan of Ethiopia is a national program, and as such it is a program of development for the whole Nation. It has by no means been conceived that planning is to be carried out by the Government for the Government only, but it extends to all economic activities and all social services, whether provided by the State or by individuals. In fact the Plan is a general framework, within which all the progressive factors should get their proper place, in order to contribute to national progress and at the same time provide for their own better present and future.

7. The economy of Ethiopia is a mixed economy, wherein public, private and co-operative initiative has to play its respective role. The Plan has to guide and co-ordinate the public and private efforts, and to ensure that one side completes and complements the other. Various development projects concerning either economic activity or social services are to be undertaken by the public, as well as the private sector, having in mind highest efficiency and national interest. Being equally important parts of the national economy, both sectors are closely interrelated, and will have to contribute to the national development accordingly.

8. The ultimate goal of economic and social development is to raise the standard of living. In fact, the standard of living primarily depends on the existing economic and social circumstances which actually constitute the framework of living conditions. Not only nutrition and diet, clothing and housing, transport facilities and other material goods and services form the living conditions, but other services and values, such as education and health, culture and arts, human rights, as well as social security and national independence, also have a decisive impact. Perhaps among

the most important components are the working conditions, how the people produce, what technology and knowledge they use, how efficient the work is in terms of effort and returns.

9. Improvement in living conditions requires better utilization of the available natural, human and financial resources, which should result in a larger and more diversified production of goods and services. Ethiopia fortunately abounds in various natural resources, both of biological and mineral origin. To utilize this abundant wealth for the benefit of the Nation, more labor and higher efficiency, as well as better equipment, have to be used. This calls for larger investment both in equipment and the human factor, which is actually the basic condition for the rise of labor productivity. To meet the capital and human investment requirements, additional domestic saving has to be provided, arising from the growth of the national income, as well as from the increase in the saving capacity. In addition, everybody will have to work hard and acquire new knowledge and skills, in order properly to utilize the equipment and increase efficiency. Thus, national progress and the improvement of living conditions call for co-ordinated efforts of all Ethiopians, wherever they work, and whatever their occupation or age might be.

10. Whereas the overall national development is conceived as a long-term process, its economic, social and political objectives have to be such as to satisfy fully the long-term aspirations and wants of the Ethiopian people. Having in mind the present pattern of the national economy, the feasibility as well as the need for progress, the long-term objectives of the Economic and Social Development to be set before the Nation are the following:

- to increase the productive capacity of the national economy so as to ensure abundant and diversified production of goods and services, and to accelerate the rate of economic growth by better utilization of the available resources;

- to change the existing technology by introducing modern machinery and equipment in all economic activities, and to raise the skill and productivity of labor, with the aim of dminishing the discrepancy between the Ethiopian economy and that of the more advanced countries;

- to raise the saving and investment potentials of the country by speeding up the growth of saving, with the object of attaining a self-sustained economic development;

- to improve the living conditions and to raise the standard of living of the population according to the growing possibilities of a steadily advancing economy,

- to provide the Nation with better social services, particularly education, public health, social security and cultural services, so as to affirm and strengthen the personality and integrity of the Ethiopians;

- to extend equal opportunities to all citizens to contribute to the economic and social progress of the country;

- to create a sound economic basis for National Defense and security with the purpose of ensuring peaceful development to the Nation, and contributing to world peace and progress.

In the course of future economic and social development and through the subsequent Five Year Plans, the present prevailing subsistence and family type of economy and society should undergo radical changes, and be transferred to modern ones. The growth of the national economy of Ethiopia will strengthen her position in the World and African economy, and acquire a better position for her goods on the world market.

## Chapter 2

## DEVELOPMENT DURING THE FIRST FIVE YEAR PLAN

1. The First Five Year Plan, comprising the 1957-1961 (G.C.) period, has been, by the decision of the Planning Board, extended to the end of the budgetary year 1954 E.C. The expired planning period unquestionably represents a very valuable experience with a manifold significance. It is a hard truth that economic and social development present, in respect to time, a continual process which does not terminate with the expiration of the planning period. Therefore the evaluation of the development in the past period should show what has been accomplished in the economic and social fields, and where the country stands at the beginning of the Second Five Year Plan. Moreover, this evaluation should throw light upon the development trends, and indicate the factors which influenced the dynamics of development. It should also emphasize the problems which the past period left as an inheritance to the Second Five Year Plan, and illuminate the weaknesses which have been manifested in the implementation of the Plan. The analyses of recent development should also help the formulation of the targets of the economic and social development for the following planning period.

### First Five Year Plan Targets

2. According to its socio-economic aims, the First Five Year Plan represented a first stage program in the development of a modern economy in Ethiopia. This Plan set forth the following basic targets: (1) to give priority to the development of infrastructure, which represents a prerequisite for accelerating the economic growth; (2) to raise the level of education and to devote attention to the training of technical personnel for the implementation of the five year programm; (3) to accelerate the development of agriculture, which represents the major sector of national economy and gives the greatest part of exports and of industrial raw materials; (4) to establish processing industries for the abundant sources of domestic raw materials and for the requirements of the domestic market; and (5) to direct the economic, and particularly the financial policy, toward the mobilization of the financial and human resources for economic development.

3. The investment policy anticipated for the First Five Year Plan was determined by the cited targets of economic and social development. Out of Eth. $ 673.6 million total investments, allocation for transport and communications has been foreseen as Eth. $ 240.0 million or 35.6 per cent; for industry, including mining, electricity and manufacturing industry, Eth. $ 138.0 million or 20.5 per cent; for agriculture and forestry, including farmers' investments in kind, Eth. $ 182.1 million or 27 per cent; for education, health, and for the program of community development, Eth. $ 57.0 million or 8.5 per cent, etc. The structure of investments has not been optimal in the sense of accelerating economic development, as it has been affected by works that had already begun in accordance with previous Government decisions.

4. The available domestic and foreign financial means were not sufficient for an accelerated development of material production, and because of this the effects concerning the increase in the national income were also smaller than those which could have been expected, had the investments been directed in a larger measure towards an increase of production. The foreseen increase of the national income from 1957 to 1961 amounted to 16 per cent, giving an approximate annual rate of growth of 3.7 per cent. It is a significant fact that the First Five Year Plan had anticipated relatively most rapid growth in industrial production. There had been a doubling of the industrial output, while the increase of agricultural production mounted to about 11 per cent.

5. The extension of the internal market has been one of the basic aims of the First Five Year Plan. Together with the growth of production and employment an increase of purchasing power of the population had been foreseen, as well as a strengthening of the monetary part of the national economy. On the other hand, economic development rendered possible the extension of foreign trade, and the Plan envisaged an increase of exports from Eth.$ 18[illegible].9 million in 1957, to Eth.$ 227.8 million in 1961, or 25.2 per cent. In the same period the value of the total imports was estimated to increase from Eth.$ 170.5 million to Eth.$ 207.3 million in 1961, or 21.5 per cent.

## National Income and Population

6. The 1954 national income estimate, computed on 1953 prices, amounts to Eth.$ 2.038 million[+]. Compared to the first planning year (1957 G.C.) there is a total increase in the national income of 11 per cent, and the annual rate of growth of the national income over the First Five Year Plan is estimated at 3.2 per cent. It is much higher than in previous periods when it was about 2 to 2.5 per cent. The pace of growth of the national economy continued to accelerate during the First Plan period, and this can be considered as a good indicator of the economic progress of Ethiopia.

7. The fulfilment of the national income target has been estimated at 95 per cent, while the rate of growth was lower by 0.5 per cent than had been anticipated by the First Five Year Plan. The implementation of the national income target fell short of its expectation due to the delay of mature development projects, as well as to shortage of foreign financial resources.

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[+] The First Five Year Plan anticipated the rate of economic growth in terms of national income, therefore this chapter deals with national income, while the others deal with gross national product.

8. Over the First Five Year Plan period the total population of Ethiopia grew from 19.4 to 21.0 million. The average rate of growth of population had been estimated at 1.6 per cent per annum, slightly more than in the previous period (1.5 per cent). This is a consequence of a decrease in mortality, due to the improvement of living conditions and health services. However, the economic structure of the population did not change substantially, about 90 per cent of the total population depending on agriculture, whereas about 10 per cent depend on non-agricultural activities. In spite of the growth of the cities and urban areas, the percentage of urban population is also low, and does not exceed 6.3 per cent of the total population. It is a peculiar feature of Ethiopian economic development that the growth of population, which was not absorbed by the non-agricultural activities, did not reduce the standard of living. Thanks to the abundant natural resources of biological origin, the standard of living of the rural population has improved, and this is particularly true as far as rural housing, nutrition, transport, education and health, etc. are concerned.

9. Owing to the faster growth of the economy than that of the population, the estimated national per capita income rose from Eth. $ 89 at the beginning, to Eth. $ 97 by the end of the period. The average rate of per capita income growth is estimated at 1.7 per cent per annum, which is a sign of a progressive economy. The recent trends of economy and population give a promising outlook for the future, because Ethiopia is no longer in a stagnant economic position, which is often characteristic of less developed countries.

Saving and Investment

10. Due to the low national per capita income, the domestic saving income ratio did not exceed 5 per cent of the national income. Over the extended Five Year Plan period, comprising in fact five years and a half, the total investment, both monetary and in kind, was estimated at Eth. $ 839.6 million. Investment in kind had been made especially by the rural population, amounting to about Eth. $ 150 million. Domestic monetary investment was supplemented by foreign resources of about Eth. $ 170 million, particularly by the end of the period.

11. Investment in kind had an important role in the rural areas, by keeping the pace of the agricultural production above the growth of the population, and by helping the improvement of rural housing. This kind of investment is particularly important for subsistence economy, where the additional work provided by the rural population can improve living conditions. However, for the growth of the whole national economy, monetary investment was much more significant, since it was intended to develop the propulsive sectors.

12. The total investment anticipated by the First Five Year Plan was Eth. $ 673,6 million, while Eth. $ 839,6 million has actually been invested.

Investment in Main Sectors During the First Five Year Plan

(In million Eth. $)

| Sector | Planned | Fulfilled | Index of Fulfilment |
|---|---|---|---|
| Agriculture & Forestry[1] | 92.1 | 109.9 ✓ | 120 |
| Mining, Power & Manufacturing | 138.0 | 51.3 - power [illegible]<br>159.8 | 116 |
| Transport & Communication | 240.0 | 207.3 - [illegible] | 120 |
| Social Services | 57.0 | 39.0 | 68 |
| Housing[1] | 122.5 | 206.8 ✓ | 169 |
| Other Activities | 24.0 | 36.8 | 153 |
| Total ① | 673.6 | 839.6 - 116 | 124 |

Total Monetary inv.
of which: infrastructure [illegible]
(com. transport + housing) [illegible]

It should be noted that the total anticipated investment was surpassed by 24 per cent. However, housing and transport and communication, which actually do not contribute directly to the growth of the economy, received the largest share, close to 60 per cent of total investment. On the other hand, the directly productive sectors, such as agriculture, mining and manufacturing received lowest priority, and this was in fact the main reason why the national income target, foreseen by the Plan, was not reached during the extended planned period.

13. There were several factors which influenced the implementation of the investment program. Firstly the non availability of matured programs for various development projects had a very serious impact. Whereas the road construction programs were highly elaborated, the industrial and mining projects were lacking, due to the fact that Ethiopia had started her industrialization only in the course of the First Plan. Foreign resources which should at least have covered the equipment costs, were short at the beginning of the Plan. Only in the middle of the Plan period were foreign

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[1] Including investment in kind

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economic assistance schemes established, enabling the Government to contract appropriate financial arrangements. Housing attracted a great part of the monetary investment expenditure due to a growing demand, particularly in Addis Ababa and some other towns. This was, perhpas, also a sign of an absence of industrial entrepreneurship, as well as of inadequate mobilization of domestic savings for development purposes. Finally, there were only few development agencies, and they were not in a position to provide all the facilities to the eventual domestic and foreign investors.

14. The dynamics of the investments in relation to time were, therefore, not optimal. In the first years of the Plan very little had been invested, so that the investment activity increased rapidly at the end of the period and in the last two and a half years about 60 per cent of the total investment amount was expended. The experience of the implementation of the investment plan in the last year is in this respect encouraging, because it shows that the investment absorbing power of economy is growing steadily. In the coming years it is to be expected that the investment made during last two or three years will yield returns, which will be an important contribution to the growth of economy. All these are visible signs of an advance of the dynamics of the Ethiopian economy, which should be utilized to full extent in the following period.

Agriculture

15. The First Five Year Plan targets concerning agriculture have been mainly fulfilled. Due to investment in cash and kind, a somewhat more rapid increase in production has been realized than in the growth of population. Agriculture continued to be the most important sector of the economy, not only in respect of its contribution to the national income, but also as far as exports and internal trade are concerned. According to very rough estimates, the production of cereals increased during the First Plan from 4.1 to 4.5 million tons, while the number of cattle rose from 23 to 25 million head. The exports of agricultural products have also recorded an important growth: exports of coffee were higher at the end of the plan period by more than 1/5, hides and skins by more than 1/2, and lentils more than 2.3 times greater than at the beginning of the period.

16. Greatest attention had been devoted to the improvement of coffee cultivation. New plantations covering 4 thousand hectares, as well as a coffee nursery, have been erected, but the methods of harvesting, cleaning and processing are still inadequate, and this has been partly responsible for the low prices of Ethiopian coffee on the world market. The same holds good for hides and skins, which also are not properly processed for export. In spite of all the efforts of the Government to promote coffee exportation, there still remains large scope for further improvement.

17. Cereal production could not meet the growing demand of the population, so that Ethiopia became an importer of wheat (45.000 tons in 1952), instead of being an exporter, as she was 5 or 6 years ago. This is actually a great handicap to the national economy, which is caused not only by short production, but also by transport problems and other factors. The growth of domestic industrial crop production which was anticipated by the Plan was not fully realized, particularly in cotton production whic fell short of the targets, with the consequence of large imports of raw cotton to meet the growing consumption of the new textile factories.

18. Livestock population continued to increase as in the previou period, following the traditional pattern of cattle raising. Slaughterhouses which have been erected during the First Five Year Plan period will undoubtedly stimulate animal husbandry. However, the veterinary service was not efficient enough to protect the major cattle raising regions from disease and death losses. It should be pointed out that animal husbandry is still far from being the propulsive economic activity it should be, considering the capacity of the livestock population and feasibility of exploiting it.

19. The extension, or alternatively the erection of new large-scale farms, based on modern technology and efficient equipment, is a promising sign of the agricultural development. Large-scale farms did not have a decisive influence on the growth of agricultural production, some of them, such as Awassa, Tendaho, Botter and others, have been started only recently, and are still in a preparatory stage. However, the experience already gathered indicates that large-scale modern farming is the right way to develop Ethiopian agriculture, especially since there is much virgin land to be settled, simultaneously with the erecting of modern agricultural undertakings.

20. At the end of the First Five Year Plan agriculture still remained the greatest reserve for economic development, in respect of abundant land, large livestock wealth and human potential. Not being sufficiently used, either for its own progress or for the growth of other industries, it actually remained an inactive asset. During the past period it was ascertained that agriculture can progress only if other industries progress, particularly the processing industries, transport, trade and exports. Except in the case of cereals and cotton, the growth of agricultural output was such as to meet the increasing demand arising from the growth of the population and the modest requirements of industry, and this is in fact due to the availability of land, and to a specifically low density of the population which prevails in Ethiopia. However, such growth of agriculture can be maintained only at a low level of overall economic development. Since the economic development will be faster in the course of the Second Five Year Plan, it is obvious that agriculture has to speed up its pace of growth, so as to be able to satisfy the growing demand for agricultural commodities.

## Mining, Power and Manufacturing

21. Owing to the fact that the mineral wealth of Ethiopia was largely unknown, the First Five Year Plan suggested intensive surveys and prospecting for precious metals as well as for other deposits, and over the reporting period, the main attention was devoted to prospecting for gold, potassium and potential oil fields. Aerial prospecting of some other regions has also been carried out as the first stage for the future detailed prospecting work. While the prospecting for gold resulted in modernized and expanded gold mines, potassium came to its final research stage, and oil prospecting was brought near to its end. These are two promising fields for future mining activity, which will contribute to the growth of economy even in the course of the Second Plan.

22. Surveys and prospecting for iron ore and other minerals failed in the past period due to the lack of private interest, as well as to the shortage of public credits. This may be considered as one among the major weaknesses in the implementation of the First Five Year Plan. Owing to the slow pace of prospecting work, there is no definite conception to what extent the mineral wealth can be used for future development. The consequence is that the iron and metal processing industries have to be postponed for two or three years, since they must be preceded by the opening of mines. Fortunately, by the end of the period under reference promising signs have been seen for erecting a steel mill, as well as for starting glass and other industries based on mineral raw materials.

23. Electric power belongs to those industries which have been most developed in the past five year period. In addition to the construction of the new hydro-electric power plant, Koka, the capacities of existing hydro-electric and thermo-electric plants have been expanded. In this way the installed power of all the public power stations has been increased from 32.000 kilowatts at the beginning of the Plan, to 82.000 kilowatts in 1954, or by 156 per cent. In addition, the exploration work has been finished, and the construction has begun of a new hydro-electric plant in the basin of the Blue Nile (56 million kilowatt hours), as well as of other smaller plants. Parallel to the construction of new productive capacities, the distribution network has been expanded, and among the most important is the high tension line Koka - Dire Dawa. It should be mentioned that the capacity of the electric power plants is much greater than the actual consumption, and this lagging of production behind the productive possibilities points to the existence of power reserves which facilitate the economic development in the coming period. In 1954 the production of energy amounted to about 145 million kilowatt hours.

24. The development of manufacturing industry in the past period shows two important facts, first, that industry has begun to penetrate the structure of national economy, and second, that the economy was not yet sufficiently penetrated by industrialization. The results achieved so far are encouraging, but are modest; they do not exceed an initial stage of the development of industry. Gross industrial output grew from Eth.$ 73 million to Eth.$ 116 million over the past five years, but the contributi of manufacturing industry to the national income remained rather small.

At the end of the First Plan period the dominant positions were occupied by food industry (including beverages) and textile industry, whose share was about 81 per cent of the total output of manufacturing industry, leaving all other industries participating by only 19 per cent in the total manufacturing output. Such a structure is typical of the first stage of industrialization and it has not changed if compared to the structure at the beginning of the First Five Year Plan. It should be noted that building material and other non-metallic mineral products showed a visible increase in production. Other branches which existed at the beginning of the reporting period increased rather slowly, whereas the production of timber processing decreased. It should be pointed out that few new commodities have been added to the previous production.

25. The factual investment in manufacturing industry was larger than had been anticipated, viz. Eth.$ 80 million as against Eth.$ 57.1 million. Several industrial projects of a great importance to the national economy, were started but not finalized during the past period. Their output over the Second Plan period will largely contribute to the growth of industrial production, although the structure of the total output of the manufacturing industry will not change in consequence. On the other hand, many industrial projects which had been foreseen by the Plan were not erected due to various reasons. Both factors have contributed to the discrepancy between investment and output, so that whereas the investment program was surpassed by 41 per cent, the plan of production in monetary terms was underimplemented by 33 per cent.

26. The initial stage of industrialization is not an easy task for a developing country to accomplish, and there are many obstacles to the industrial development to be surmounted, both of an internal and external nature. In spite of the many difficulties with which Ethiopians had been faced the industrial development over the last five years appear to be very encouraging. Not only from the point of view of current econom activity, particularly in respect to imports of textiles, sugar, etc., bu also from the point of view of a long-term economic development, the Firs Five Year Plan's industrial program was a very stimulating one, and at th end of the First Plan period, Ethiopia possesses many modern industrial undertakings. The industries already established require additional agricultural raw materials, and they stimulate the growth of agricultural production. Existing industry is able to produce sufficient consumers' goods which are a base for domestic consumption, it contributes largely to the

domestic saving, and it is a sound basis for further industrial expansion. All this is actually a good starting point for a faster industrialization, which can take place in the course of future Plans.

Transport and Communications

27. Large-scale construction of roads and an increase in transport facilities are an important sign of the economic development of Ethiopia in the recent period. Road construction was to a certain extent overstressed, because it was not in conformity with the other economic activities which it should serve. More investment means have been spent than were foreseen by the Plan, even though the Plan had also set too broad limits for the development of transport. Several highways with modern carriageways have been built, and other roads have been improved, so that today Ethiopia has nearly 4,738 km of all-weather roads. In the period the problem of local traffic in Addis Ababa has been temporarily solved by introducing autobuses. The number of motor vehicles has increased rapidly, from 18 thousand to 25 thousand, with the consequence of better transport facilities.

28. Other kinds of transport have also been improved over the past period. A large-scale program of airport construction was started, and new aircraft will be acquired at the beginning of the Second Plan. In accordance with the First Five Year Plan the new Assab Port was constructed, being a very important step to further development of international trade, but the maritime fleet program was not implemented according to the First Plan, ith the consequence that Assab Port was inadequately used. The existing railways did not make any significant progress in spite of the growth of the volume of internal and foreign trade. The telecommunication system was expanded over the reporting period, while the post services remained unchanged.

29. In respect of the development of the other economic activities, such a rapid development of transport and communications was not motivated only by economic requirements. Other factors, such as foreign credits, existing transport and constructing agencies, and the stage of studies, helped very much the growth of transport and communication facilities. In principle, not much expansion of the road network could be seen, because Ethiopia is a spacious country, where many regions are not yet opened. The weaknesses of the road construction was in the expensive projects and methods of construction, the use of machines did not extend the possibility of engaging local man power, and due to this many positive economic effects which could have been realized were not achieved. The experience of experimental sections of moderate scale roads, which were started by the end of the First Plan, high-lighted the need of a radical change in the methods of road construction. Another problem which arose during the First Plan was the disproportion between transport network and equipment, and as a result the contribution of transport and communication to the national income was smaller than it should have been, and the services did not meet adequately the needs of the economy.

## Foreign Trade

30. Recent foreign trade trends may be taken as an illustration of a positive, but as yet not sufficiently speedy, development of the Ethiopian economy. During the First Five Year Plan period total exports increased from Eth.$ 155 million to Eth.$ 184 million, while imports increased from Eth.$ 167 million to Eth.$ 228 million.

The volume of exchange of goods with foreign countries grew rapidly; the average annual increase amounted to 3.5 per cent for exports and 6.4 per cent for imports. Exports and imports during the observed perio showed, in fact, a continuously increasing trend, which started in the first postwar years.

31. The turning point in export-import relations was 1951, when the balance of trade began to be negative, and continued to be so even in later years. The reasons for this were the rapid increase of imports and the unfavorable terms of trade. Imports of capital goods, and goods in process, largely contributed to the negative balance of trade, and consumer's goods have also influenced the rapid growth of imports, with a considerable participation of durable goods. Exports were not in a position to keep up with such a fast growth of imports, because the decreasing trend of agricultural prices on the world market for products which Ethiopia mainly exports was very discouraging, while industrial prices have had a rising tendency. This also handicaped the economies of Ethiopia, as well as of other developing countries, which are producers of raw materials and importers of manufactured goods. In spite of many external difficulties, the First Five Year Plan export target was realized in full in quantity, but it was not realized in terms of value.

32. The main export articles of Ethiopia during the reporting period were coffee, hides, skins, oil seeds, cereals and meat products, which, by the end of the Plan, comprised 87 per cent of the total exports. The basic imported products were cotton and cotton products, liquid fuel, equipment, transportation means, and metals and their products, which comprised 64 per cent of the total imports. Taking into consideration the level of development and the structure of economy, a dominant share of agricultural products and raw materials in exports, and an outweighing participation in imports of industrial products represents a normal situation. However, it is a source of many difficulties and losses to the Ethiopian economy, and it is necessary to strive to change it as soon as possible.

## Social Services

33. The Government made considerable efforts to extend the social services, and to encourage overall social development. The First Plan had anticipated a further development of the social services, and had initiated the Community Development Program. Besides the various measures which had been undertaken to implement the program concerned, the public servant

pensions scheme was studied and will be started in 1955, the broadcasting system was expanded and diversified, cultural life was encouraged in all respects, new technical and other reviews, as well as newspapers, were established, etc. The Government offered Addis Ababa as the seat for the United Nations Economic Commission for Africa, and provided all the facilities in this respect. Promising changes occurred in social and cultural life, not only in Addis Ababa and the urban areas, but also in the countryside.

34. During the past five years the Government opened 82 new schools, and it is particularly significant that the number of Academic Secondary Schools was trebled while the number of Special Secondary Schools increased 4.4 times. The lack of Special Secondary Schools formerly presented, and still presents, a bottleneck in the educational system. The total number of pupils and students in the Government schools increased by 32 per cent, and it is noted that the number of students grew faster in the higher than in the primary schools. The increase in number of students in general was more rapid than the increase of educational institutions; this is indeed, an encouraging sign, because in this manner the fixed assets of educational institutions are being better utilized.

35. In spite of all improvement, at the end of the First Five Year Plan secondary and higher education was scarcely developed either in the absolute or the relative sense, and these schools were attended by only 4.3 per cent of the total number of pupils and students. Even the primary schools comprised a relatively small number of school-age children, hardly 10 per cent of the total number. The best situation, as far as enrolment is concerned, was in the first grade, which was attended by almost 30 per cent of school-age children, and the worst was in the eigth grade which was attended by a mere 2.5 per cent. The fall-off in the course of primary schooling presented one of the real basic problems of general education, and it was actually the reason of the under-implementation of the First Plan targets concerning primary education. Out of the total number of pupils and students there were only 23 per cent females. The number of teachers was in main sufficient, 7.195 teachers, instructors and professors being employed in Ethiopia, of which there were 1.301 foreigners. The number of foreign teachers shows that the problem of educating the Ethiopian teaching staff is acute even in this present stage of the development of education.

36. In the course of the present years a systematic study of public health problems was carried out, and programs were designed. Provincial hospitals with a total of 300 beds have been constructed, as well as the Pediatric Hospital in Addis Ababa. With the view to decentralizing the health services, 50 health centers and 100 health stations have been established throughout the country. The number of hospital beds has been increased by 5 per cent, and the health stations by 35 per cent. The personnel trained in the Gondar Public Health College, and in other institutions, entered the public health program in the early part of the First Five Year Plan.

37. The Malaria Eradication Program started at the beginning of the First Plan, both in its experimental and training aspects, and by the end of the Plan the Program has expanded to an organisation of 335 regular employees, protecting about 10 per cent of the people exposed to malaria risk. Venereal disease control was continued throughout the period and campaigns carried out in four provinces treated 250.000 people. Tuberculosis Control was initiated, Leprosy Control extended throughout the country, and the Trachoma problem studied, to gather the necessary information for future control measures. New programs, such as Maternal and Child Welfare, and Clinomobile Service, have also been started during the past period.

38. Community Development played an important part in the field of social progress in rural areas, although it is in its experimental stage. Conceived as a coordinated development of rural settlements this program comprised agriculture, various local activities, water supply, the construction of local roads, health protection, education, etc. It is understandable that community development required material means and skilled personnel and it also presented a novelty in the organization of life in the Ethiopian village. It has been necessary therefore to carry on experiments in this field, in order to find adequate methods for the reconstruction of the village. In the framework of community development, in the reporting period, fourteen centers together with about 70 branches have been opened in various parts of the country, and altogether they cover about 74 various activities. Trained personnel numbering about 300 are being employed in the community development centers.

## Effects and Problems

39. The First Five Year Plan period is an important period of the economic and social development of Ethiopia. All sectors of the economy, as well as social services, have advanced during this period. The standard of living has been gradually improved, and the per capita consumption of basic commodities rose, thanks to growing domestic production. Trade and commerce have been expanded, with the consequence of a further monetization of agriculture and other rural activities. The psychological effects of such a development are favorable, since people are getting more and more interested in general and regional development, as well as in the improvement of their own lives. By the end of the First Plan local initiative to erect new developmental projects had grown fast, indicating the readiness of the people to contribute to the development of the local community, and of the whole country.

40. The acceleration of economic growth and of social services has, however, brought forth new problems, which in fact arise in all developing countries. Low saving capacity and inadequate methods of mobilizing savings required for an accelerated development were perhaps the most serious obstacle to faster growth. In addition, the investment structure, in which priority was given to infrastructure, was not such as to expand production to the extent needed. Under-fulfilment of the industrial

program had unfavorable consequences in agriculture, both in respect of demand for agricultural raw material and of the supply of improved tools and implements. The production of raw material, both of agricultural and mineral origin, lagged behind the growing demand of the newly established industries. Although balance of trade difficulties are to be expected in a growing economy, they have also contributed to the creation of new economic problems.

41. The changes in the economy and new economic problems were accompanied by other human factors and organizational problems. The lack of trained personnel and skilled workers is a well known characteristic of each developing country and the growing demand of the economy and social services for cadres and skill cannot be met by the existing educational system. In spite of all the efforts the Government has made to provide the young generation with sufficient and adequate training, either in the country or abroad, there has been a permanent shortage of technical, managerial and administrative staff. As a consequence, there were many shortcomings and bottlenecks which hindered the implementation of the Plan. The coordination of work among the various Ministries and Government Agencies was not always satisfactory. Inadequate economic legislation and lack of information did not encourage the foreign investor to start new undertakings, while domestic initiative was handicapped by the shortage in managerial staff. The development and promotion agencies, which are a very important factor in developing countries, were not established in all fields of productive activities, so that the Government was not in a position to help the economy, by its own organization, to overcome the difficulties which have appeared.

42. The problems and difficulties already mentioned are of course a peculiar sign of growth, and stagnant societies are not faced with either economic problems arising from the changes in economy, or with difficulties of institutional and human nature. In spite of them, at the beginning of the Second Five Year Plan, Ethiopian economy is ready for further accelerated growth. National production is steadily growing, as well as the investment-absorbing capacity of the economy. The economic activities already established call for further economic expansion and offer good opportunities for the future agricultural and industrial growth. The Ethiopian technical and managerial staff, as well as farmers and workers, acquired experience during the First Plan period, and will be able to assume larger production tasks and responsibility. Reforms to be carried out to improve the economic and social institutions have been carefully studied recently, and will be implemented at the beginning of the Second Plan. All this, together with the growing desire of the people for progress, and increasing consciousness and responsibility, is a sound basis for speeding up the development and multiplying the efforts for the benefit of all.

# Chapter 3

## LONG - TERM ECONOMIC DEVELOPMENT

1. The progress achieved over the First Five Year Plan brought into the economy new components which indicate the new tasks to be carried out in the course of the coming period. Economic and social life became more complicated and the relationship among various sectors more delicate. Simultaneously with the growth of economy and social services, new needs have been created so that the scope of development increased. Increasing needs are being faced with still limited human and material resources, emphasizing the ranking of priorities, and in such circumstances, planning for the Second Five Year Plan targets and resources had to be approached as a part of a long-term development program, in order properly to assess the immediate and prospective targets, and to allocate the resources in an optimum manner.

2. In the framework of the preparation of the Second Five Year Plan two assessments of immediate and future needs and possibilities have been made. Firstly all the Ministries and Government Agencies have prepared their long-term development programs, aimed at extending and improving economy, social services, public administration and other sectors. Sectorial programs were actually the greatest possible development objectives, to be considered in relation to the real human and economic potentials. Secondly the Office of the Planning Board worked out a twenty-year development projection, intended to forecast the growth of population, production and consumption, as well as the costs of the anticipated development. Its particular aim was to integrate the Second Five Year Plan development programs into the twenty year period, so as better to assess the objectives and targets to be fulfilled during the Second Plan period, as well as to forecast the resources which will be available.

3. The time factor is a very crucial point in long-term and medium-term planning, since both objectives and resources have to be properly phased to maximize the benefits, while minimizing expenditures and effort. Long-term analyses made by the Office of the Planning Board clearly showed that if a long-run economic and social progress were to be achieved, the Second Five Year Plan had to emphasize the development of the national economy, and especially of the directly productive sectors. Only by promoting the national production in the course of the next five year period can additional incomes be generated, to be used not only for further economic expansion, but also to satisfy fully the wants for education, health protection, better public administration and other relevant services.

### Growth and Structure of the Population

4. So far no population census has been carried out in Ethiopia,

so that the present population estimates are based on the 1949 population count, two sample surveys, and on estimates made for the First Five Year Plan. Due to the lack of vital statistics, the rate of growth of the population also had to be estimated by assuming that the improvement in public health will gradually reduce mortality, while some growth of fertility might be expected. According to the stated assumptions, the growth of population of the whole of Ethiopia has been forecast as follows.

Growth of Population, 1949 to 1974

| Year | Population in millions | Rate of growth |
|---|---|---|
| 1949 | 19.4+ | - |
| 1954 | 21.0 | 1.6 |
| 1959 | 22.9 | 1.8 |
| 1964 | 25.1 | 1.9 |
| 1969 | 27.3 | 2.0 |
| 1974 | 30.0 | 2.0 |

During the next five years the total increase in the population is estimated to reach nearly two million while in 1974 the population will be larger than in 1954 by about 9.0 million. Such a rapid growth of population is encouraging, both from the point of view of the labor force availability, and of the extension of the domestic market, particularly since Ethiopia is a sparsely settled country.

5. Along with the growth of economy, the economic structure of the population is expected gradually to change. At present the share of the agricultural population is estimated at 18.9 million or 90 per cent, but assuming a growth of economy of about 5 per cent over the twenty-year period, which includes a much faster growth of industry and nonagricultural employment, the share of the agricultural population might fall to about 72 per cent. It is to be expected that out of the 9 million total population increase by 1974, 2.7 million will be added to the agricultural population, and 6.3 million to the nonagricultural. At the end of the twenty-year period, agricultural population may be forecast at 21.6 million and nonagricultural at 8.4 million.

6. Simultaneously the urban population is also expected to grow. The present urban population is estimated at 1.5 million or 7.1 per cent of the total population. Assuming that the bulk of the increase of nonagricultural population will reside in

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+This figure has been corrected in accordance with the latest estimates.

urban areas, the 1974 urban population is forecast at 7.6 million, or 25 per cent of the total population. This means, inter alia, that the future economic and social development will have to provide additional housing and municipal services to meet the demand of the growing urban population.

7. According to the comparative analyses concerning the availability of natural, human and financial resources, population together with agriculture seem to be the most abundant resource. It is actually the biggest national asset and a great reserve to be mobilized for future economic and social development. Throughout the subsequent five-year plans the financial resources are expected gradually to become a more abundant factor. Mineral resources should also be utilised for the economic development, thanks to prospecting and the opening of mines which is anticipated. The relationship between various resources in respect of their availability will therefore change in favor of capital and mineral resources. However, the population will still retain its position as an abundant factor due to its growth and to the large percentage of the agricultural population. This points to the need for an adequate labor policy, both with regard to industrial employment and to a fuller utilization of agricultural labor. Labor intensive methods, especially in agriculture and rural housing and local development projects, will have to be continuously promoted, to provide the economy with additional labor, which is in fact the generator of wealth and income.

8. Whereas the population will be one of the most important factors of economic development, it should also receive better education, fuller health protection and other essential facilities. Owing to the present level of the national per capita income and lack of trained personnel, the social services cannot grow in the beginning of the twenty-year period at the pace one might desire. In the coming period top priority should be given to the development of production, with a view to creating a sound material basis for speeding up and improving both economy and the social services, but, in spite of limited resources, organized efforts have also to be made to extend better education to the young generation to spread skill, and to introduce the new knowledge required to run a multiplied and diversified economy, as well as social affairs. Since the rise of economy and the introduction of modern technology will be faster than regular education, in addition to the established methods, extraordinary methods should be introduced, such as in-service training, evening classes, etc. The diversification of the economy and society will undoubtedly require and stimulate the growth of education, science, skill and experience. The nation must afford to progress in this respect; it should not wait only for Government action, but should assist all initiative

and self help intended to acquire better education and skill. This is actually an edeavor which will not only promote economic and social progress, but also change the quantitative characteristics of the population, which seems to be a very important factor in the future demographic trends.

## Rate of Economic Growth

9. Both for internal and external reasons Ethiopian economy can no longer sustain a slow rate of growth. If the level of living is to rise, if employment is to increase, if the consumption and social services are to grow, the rate of economic growth must be higher than it was and must follow an accelerating trend. This is necessary also because of Ethiopia's position in African and World affairs, which will become more firm as the national economy strengthens. To accelerate the rate of growth is therefore the basic national target, worth the Nation's efforts and sacrifices, particularly in the first stage of the coming twenty-year period.

10. The rate of growth of the economy for the next twenty year period has therefore been estimated at 5 per cent on an average, compared with 3.4 per cent during the First Five Year Plan and it should rise to 4.3 per cent during the Second Plan and achieve about 5.8 per cent over the Fifth Plan period. This acceleration of growth is, indeed, a realistic and feasible target, starting from the existing lower level, appreciating its present stage of economic development, as well as the institutional background, and rising gradually following the changing structure and capacity of the economy. At the end of the twenty-year period the rate of economic growth should be such as to allow further speeding up of the economy, and of social and other services.

11. According to the expected rate of growth, the gross national product should double by the middle of the Fifth Five Year Plan. Estimates made by the Office of the Planning Board suggest that the gross national product should attain at the end of each consequent Five Year Plan, the following approximate amounts

Gross Domestic Product Estimated over the Twenty Year Period
(In million Eth. , 1953 prices)

| End of Plan | Gross Domestic Product | Index Number | Rate of Growth |
|---|---|---|---|
| First | 2 130 | 100 | - 3.4 |
| Second | 2 632 | 124 | 4.3 |
| Third | 3 310 | 155 | 4.7 |
| Fourth | 4 270 | 200 | 5.2 |
| Fifth | 5 650 | 265 | 5.8 |

12. In spite of an accelerated population growth, the national per capita product is expected to rise from Eth. 101 in 1954, to Eth. 188 in 1974. The rate of growth of the per capita product for the twenty-year period has been estimated at 3.2 per cent per annum, which should be compared with the First Five Year Plan's rate of 1.8 per cent. Such a relative growth of the gross national product will allow not only an increase in consumption, both personal and general, but also an increase in domestic saving, to be used for further financing of the national development.

Production Objectives

13. The twenty-year development program envisages changing the Ethiopian economy from a backward, predominantly agricultural, to an up-to-date and efficient agro-industrial one. Ethiopia abounds in agricultural wealth, rich soil and very favorable climatic conditions, which offer such diversified agricultural production, capable of supplying the less favored world regions. Her contribution to the world exchange should therefore be in various agricultural commodities, properly processed and of a standard quality. Ethiopia's agricultural and animal husbandry raw material basis demands the development of a strong processing industry, not only from the point of view of the national economy, but also with regard to international division of labor. With this in view, the long-term development program should endeavor to extend the cultivable areas to the promising valleys, to improve cattle raising, to erect modern large-scale agricultural undertakings, as well as a processing industry based on the available raw materials of biological origin.

14. Due to the size of her population Ethiopia should construct all kinds of consumers' goods industries, intended to meet the growing domestic demand. It is to be expected that the internal market will rise both on account of the growth of population and of personal incomes. The changes in the economic structure of the population, as well as the urbanization, will create new needs and additional demands to be largely met by the domestic industry. It is a happy coincidence that both the standard of living and the industrial production are expected to rise simultaneously, so that each will encourage the other. As a consequence of industrial growth, urbanization and the overall economic development will stimulate the building and construction activity, which will require additional building material to be produced by the domestic industry.

15. It has been estimated that the value of the total equipment to be installed in the new factories, and to be provided for agriculture and other industries during the Second Plan, will come to about Eth. 600 million. The value of equipment for the Fifth Five Year Plan is forecast at about Eth. 2,000 million, whereas the value of the equipment for subsequent plans will grow steadily. Thanks to the

mineral wealth, and to abundant power resources, Ethiopia should be able to produce in the near future a large part of this equipment in domestic factories. The long-term development program foresees, therefore, the erection of a machine-building industry, but in the following stages: studies and prospecting for metal ore and power which are to be completed in the beginning of the Second Plan; opening of mines and construction of the steel mill which is to be finished during the Second and at the beginning of the Third Plan; starting the metal processing industry in the course of the Second Plan; and production of machinery and equipment in the Third Five Year Plan. The development of steel, metal processing, machine building and electric industries will reduce heavy imports of equipment and will also strengthen the whole economy and contribute largely to National Defense and to the international economic position of the country.

16. Power and energy will be steadily of higher importance both for the economic developments and in the everyday life of the people. In 1954 not more than 145 million kWh of electric energy had been consumed, but the total requirement of electric power in 1974 has been estimated at 1,500 million kWh. In comparison to 6.9 kWh per capita consumption of energy of all types in 1954 (except liquid fuel), in 1974 the per capita consumption of energy is estimated at about 80 kWh. The increasing consumption of energy will be required by the new technology which is about to be introduced. It will largely contribute to the efficiency of labour, and help the efforts to be made for speeding up agricultural and industrial development.

17. The mineral wealth and energy supply will create a sound basis for the growth of the chemical industry. Modern industrial development cannot neglect the chemical industry, so that even the Second Five Year Plan has made provision for industrial undertakings of this kind. Future agricultural production will ask for the production of fetilizers, insecticides and other chemicals for crop protection and industrial and personal consumption will call for synthetics, plastics, and other chemicals as substitutes for the raw material lacking in this country, as well as for the production of new capital and consumers' goods.

18. Being internally consistent and interrelated, the expected development of agriculture, mining, power, manufacturing and construction, will create a mutal offer/demand, which is so much needed for successful economic growth. Moreover, the growth of directly productive industries will affect and promote the development of transport and communications as well as of trade and commerce and other services. The transport network should therefore be extended, to link all the regions into an economic whole and to create the preconditions for establishing an integrated national market. In this respect railways will have to play an important role, so that the railway network extension should start in the course of the Third Plan, and continue on a more extensive basis in the second decade of the twenty-year period. Maritime, transport, which will have to carry a substantial part of the growing exports and imports should

also develop rapidly, starting from the Second Five Year Plan period. Finally, the road network as well as the road transport should grow in proportion, to provide transport facilities to the regions which cannot be served by the railways.

## Changing Pattern of Technology

19. Obviously such growth of economy cannot be expected on a traditional technology and equipment basis. The modern world has already been faced with two industrial revolutions, steam, and electric power, and stands on the threshold of the atomic age. In the 19th and early 20th centuries Ethiopia had been passed by the great technologic changes which have completely transformed the patterns of production. She has now to make up for the gap created by history, and introduce contemporary techniques and methods in the national economy. She has also to be ready to enter, together with other nations, the new age which the world is now confronting.

20. The future economic development of this country will have basically to rely on modern techniques and equipment, which will call for large capital investment to be provided during the next twenty years. Since capital will not be an abundant factor of economic development, new techniques and modern machinery have to be introduced only when they are economically justified, having in mind the availability of other factors, especially labor. Parallel with the capital intensive schemes, the labor intensive ones have to be promoted also, due to the fact that population offers a large and promising labor force. Small improved tools and implements, bigger input of labor, better organization and managerial efficiency, together with conscious hard work, are also channels to progress. The five-year and annual development programs will have therefore to assess properly the proportions between the capital and labor intensive schemes, with the view to an optimum utilization of the labor force and capital investment.

21. The changing patterns of technology point to the importance of skill and applied science over the whole twenty-year period. National efforts should be made to introduce new techniques and methods and to train the population to utilize them adequately. Not only machinery and equipment, but efficiency and intelligence of the laborers will speed up economic and technical progress. This is, indeed, a mutual process, in which new equipment encourages the skill, while skill adds to the efficiency of the equipment. However, this existing potential of progress should be promoted and organized by all the factors concerned, educational institutions, Government agencies, industrial and agricultural enterprises and others. Particular attention should be devoted to applied research, both in natural, technical and social sciences, for this is the only way to ensure future development in all fields.

## Investment Requirement

22. Long-term development objectives in respect of the growth of production and consumption will require above all, financial resources. A realistic development program ought to be backed by an appropriate financial scheme to assess the feasibility of financing and achieving the established targets. The long-term project worked out by the Office of the Planning Board estimates the total investment expenditure over the next twenty years at Eth. 12,682 million approximately.

### Estimated Investment During the Twenty-year Period
(In million Eth. )

| Five Year Plan | Total investment | Five Year Investment as per cent of total | Index Number (First Plan = 100) |
|---|---|---|---|
| Second | 1 696 | 13.4 | 202 |
| Third | 2 420 | 19.1 | 286 |
| Fourth | 3 516 | 27.7 | 419 |
| Fifth | 5 050 | 39.8 | 601 |
| Total | 12 682 | 100 | - |

It should be pointed out that the investment requirements are estimated as growing steadily. During the Second Plan period investment is expected to double if compared with the First Plan, this is actually necessary to accelerate the growth of the economy at the very beginning of the twenty-year period. As to the Fifth Plan investment, it has been anticipated to be about six times that of the First Plan.

23. The financial scheme for the investment program assumes a) positive effects of economic growth with regards to extending the domestic saving capacity, which is the main source for financing the development program, b) a peaceful era in world relations with a consequence of raising cooperation and responsibility of economically advanced nations in the progress of developing countries c) a favorable internal and external economic situation and d) full cooperation between the Government and other factors involved in planning for economic and social development. In the hope that these favorable circumstances will exist, the total investment requirements might be covered by both domestic and foreign sources.

24. For the whole twenty-year period the share of domestic sources has been estimated at Bth. 8,450 million, or 67 per cent of the total, and foreign sources at Bth. 4,220 million, or 33 per cent. It should be pointed out that the need for foreign resources might grow until the Fourth Plan period in spite of the increasing domestic funds for investment. However, starting from the Fifth Plan, the share of the necessary foreign resources will decrease, since the domestic saving potential will be such as to be able to cover approximately four fifths of the investment requirements.

25. The investment program for the twenty-year period has been worked out by the Office of the Planning Board on the following economic consideration. Firstly, the bulk of investment means has to be directed to the directly productive sectors, which should in the shortest possible time generate additional incomes and savings. Secondly, the development of infrastructure as a whole should be closely related to the growth of productive sectors, so as to derive the maximum economic results from the infrastructural investment. Thirdly, the economic and social projects have to be properly phased and integrated in the development entities, with the view of maximizing the returns. Fourthly, capital or labor intensity of the project should be assessed according to the availability of both the capital and labor force, having in mind the growth of the productivity of national economy as a whole. Fifthly, economy in costs of development should be the guiding principle, particularly as far as building and construction are concerned. As a result, the average capital coefficient has been estimated at 3.60 for the whole period, allowing for its increase from 3.35 during the Second Plan to 3.70 in the Fifth Plan.

26. The implementation of the development program will call for a firm Government policy concerning saving and consumption, and the full cooperation of the business community and the general public. The growth of domestic saving implicates the control of private and Government consumption, so that the current consumption can be partly postponed and transferred to productive investment. The saving income ratio should rise fast over the twenty-year period, while total consumption should be allowed to keep pace with population growth in addition to the improvement in the standard of living.

## Second Plan - Next Phase in Long-term Development

27. The Second Five Year Plan period is the most crucial period of the long-term development program with regard to its production targets, as well as to investment and organization. As a bridge linking the past period, which might be considered as the preparatory phase for a faster development with the future development stages, it should speed up the growth of economy so as to make possible the fulfillment of the long-term objectives. Many new economic and social undertakings will have to be created during the Second Plan to change the structure of the economy and to prepare it for the future tasks. The investment program for the Second Plan has, therefore, to emphasize the

most promising and most prospective projects to provide not only immediate but also the long-term effects. A specific task of the Second Plan is to adjust the institutional framework, including the public administration and business organization, to a fast-growing economy.

25. Within the next five-year period the first year will certainly be the most decisive one. The bulk of organizational work has to be accomplished in 1955 E.C., to avoid any kind of delay in the implementation of the development targets. The importance of the reorganization cannot be over-emphasized, since it affects not only the various organization schemes,but also the mentality and motivation of the people. In addition, during the first year, saving capacity has to be increased by promoting private savings and raising the Government saving. Mobilization of domestic saving for development purposes should be backed by foreign financial arrangements, to ensure sufficient foreign resources for the implementation of the program.

## Chapter 4

## THE SECOND FIVE YEAR PLAN IN OUTLINE

1. The level of economic development achieved during the First Five Year Plan, as well as the place of the Second Five Year Plan within the framework of a long-term development program, suggest that the most propulsive sectors in the coming period will be mining, manufacturing and power. Agriculture will remain the leading economic activity and will give the largest contribution to the increase in national production, in spite of its moderate rate of growth. Other economic activities, particularly trade and commerce and transport and communications, should grow more slowly than the industrial sector, but they should provide sufficient facilities for increasing production. As to social services, their development should be much faster than in the previous period, but will not be in a position to meet all the growing requirements.

### Development Targets

2. Agriculture as a whole is expected to keep its pace of growth faster than the growth of population in order to supply more food for domestic consumption, and more products for the processing industry and for export. The growth of agricultural production should also help to increase the level of living of the rural population and to bring progress to the countryside. As far as commodity sectors are concerned, the following targets are being set for the Second Five Year Plan period:

(i) to increase the production of cereals to 5,402,000 tons in 1959, to provide sufficient cereals for domestic consumption, and to promote the expansion of export;

(ii) to increase the production of cotton to 14,000 tons in 1959, and of coarse fibres to 9,000 tons, to supply the domestic industry with 58 per cent of cotton and 100 per cent of coarse fibres needed;

(iii) to supply the meat industry with 600,000 to 700,000 head of cattle in 1959, mainly to be processed for export, but also for domestic consumption;

(iv) to expand the production of traditional export commodities, and to improve their quality; particularly to increase the quantity of coffee for export to 75,000 tons in 1959;

(v) with the view of improving the diet of the population to produce more vegetables, fruit, milk, eggs and other products.

3. To achieve the production targets foreseen for the Second Five Year Plan, both the subsistence and monetary sectors of agriculture should be encouraged and developed. Important improvement can be brought into the subsistence sector by introducing improved tools and implements, modern techniques, and better seeds. The Government's policy concerning credits, prices, and taxation, as well as land reform and agricultural

services, should create a sound economic climate by which farmers will be encouraged to invest and increase production. Farmers should be assisted produce more marketable surplusses, so as to continue to develop the subsistence sector of the agriculture into a monetary one. However, the production targets in respect of industrial crops and livestock cannot be fulfilled by the subsistence sector only. Large-scale and mechanized agricultural undertakings have to be established by private concerns, Government, and co-operative initiative. Large-scale establishment coincides wi the settlement program; it is the most appropriate and the most efficient means of bringing the virgin land to cultivation and of increasing the agricultural output.

4. Mining.- During the Second Five Year Plan surveying and prospecting for mineral wealth should be given the highest priority, to ascertain the kind of minerals that are available, where the promising regions are, and what quantity and quality of mineral resources can be exploited at reasonable costs. The future industrial development largely depends on the utilization of minerals. Therefore, the Government will encourage the undertaking of prospecting work by private concerns, and will also assume responsibility for basic surveys and studies. The extraction and exploitation of minerals should receive more importance during the Second Five Year Plan. The exploitation of precious metal mines will extended; new mines should also be opened both for supplying the domestic industry and for export.

5. Power.- Electric power will remain to be the most important source of energy during the next Five Year Plan. The construction of the electric power plants already started will be continued and new ones will be erected with the aim of increasing the productive capacity of the powe plants to 355 million kWh in 1959. Surveys have to be undertaken to facil tate the implementation of the long-term program. In addition, the Assab Oil Refinery should be completed during the Second Plan with a final capacity of 500,000 tons of crude oil. During the coming period efforts shoul be made to extend the bases of the power generating system to new sources, such as domestic crude oil, coal, solar energy and others in order to improve the energy balance of the country.

6. Manufacturing Industry should aim at a better utilization of the existing agricultural wealth, particularly livestock, oil seeds, fibers, etc. The processing industry should, in fact, assist the development of agriculture by increasing the demand for raw materials of biologi origin and by supplying agriculture with improved tools and implements. T agro-industrial complex is an important part of the Second Five Year Plan aimed at utilizing the already existing wealth for development purposes, at promoting exports and increasing the domestic saving capacity. In addition to the agricultural processing industry, the industrial program for the Second Five Year Plan anticipates the construction of other manufacturing industries, such as the consumers' goods industry, the building material industry, and others intended to meet the increasing needs of the

population and of economic development. The implementation of the industrial program should also improve the foreign trade balance by replacing the importation of consumers' goods and by additional industrial exports.

7. Conceived as the initial phase of the twenty-year development program, the Second Five Year Plan has to create the preconditions for faster industrialization. With this in view, the Second Plan industrial program foresees the preparatory works and construction of the iron and steel combination which is to be erected in the country. The combination will consist of iron mines, power plants and iron and steel works, with a final capacity of 80,000 tons of steel per annum. Steel production is anticipated for the beginning of the Third Five Year Plan, so that the newly established metal processing industry will be supplied with raw materials, partly by the Akaki Steel Plant and partly from imports. Meanwhile, prospecting for iron ore and coal in other promising regions is also foreseen by the Second Plan in order to find out the possibilities of erecting new steel plants to supply other regions of the country. The building up of the chemical industry which is to be started during the Second Plan is also of a long-term development nature. Based on mineral raw materials and wood, as well as on the by-products of the oil-refinery, the chemical industry will have to play an important role in overall economic development. It should be pointed out that the steel, metal processing and chemical industries are being foreseen on a moderate scale-basis. This seems to be necessary to fit the new industries into the framework of the overall industrial growth, and also to acquire the experience and knowledge needed for the future large-scale industry based on modern technology.

8. Building and Construction is estimated to grow rapidly during the Second Five Year Plan due to the new industrial, agricultural, and transport projects which are to be constructed, as well as to the expansion of housing. Since building absorbs 30 to 40 per cent of the total investment expenditure, economy in costs has to be realized by proper designing, better organization and higher efficiency. With this in view, the Government will make rules and regulations concerning the designing and execution of the work. Supervision, and control of quality, will be extended and strengthened by the competent Government Authority to secure the safety of structures. Domestic building and construction firms, as well as designing and consulting firms, should be established to contribute to the implementation of the investment program and to the stability of the building market.

9. Transport and Communications are expected to meet the increasing demand for their respective services, arising from the growth of the economy. The road network has to be extended by 1,300 km.of highways and 1,000 km. of feeder roads. With the aim of improving road transport, new public enterprises will be established, both for passenger and for cargo transport. Additions and improvements in the existing railway capacities are expected, while surveys and plans will be made for the

future construction of the railways Awash-Tendaho-Assab, Nazareth-Dilla (Sidamo) and Agordat-Tesseney (Sudan border). In addition to the already contracted arrangements concerning international air transport, the internal air communications have to be improved by acquiring additional air craft. The port of Assab will be completed with equipment and services, and a national shipping company will be established as a nucleus of the future Ethiopian commercial fleet. Postal services should be expanded and improved, as well as telecommunications, which should link new regions of the country. With the view to co-ordinating all kinds of transport and communications a specialized Government department will be established, while the operational work will be performed by autonomous public agencies.

10. Trade and Commerce will have to follow growing production and ensure a better exchange of commodities among various regions. Foreign trade should increase nearly twofold by the end of the Second Five Year Plan; imports should rise to Eth.$ 419 million and exports to Eth.$ 327 million in 1959. The Government will encourage the import of equipment and goods in process by an adequate foreign trade policy to facilitate the implementation of the investment program. On the other hand, imports of consumers' goods will be kept under control, to avoid the imports of nonessential goods. Exports of traditional export commodities, as well as of processed and semi-processed goods to be supplied by newly established industries, will be promoted by the Government through appropriate measures. The Coffee Board, Grain Corporation, and other trade promoting agencies will improve marketing, and provide storage facilities. As far as catering is concerned, additional hotels and restaurants are expected to be built, because both foreign and domestic tourism is expected to expand.

11. Education.- The educational program should be extended with the aim of providing the population with elementary education, and to train the necessary technical personnel and skilled workers for economic and social development. As far as elementary education is concerned, the proportion of enrollment in the age group 6 to 11 should increase from 5 to 15-18 per cent, and fuller attendance in the higher classes of the primary schools should be insisted upon. The local communities should participate in meeting education expenditure, particularly for buildings and equipment of the primary schools. The Government will ensure a uniform program for primary schools, as well as for teacher training and supervision. During the Second Five Year Plan more attention should be given to secondary technical education, particularly to the Special Technical Schools. Vocational training should be encouraged not only by regular education, but also through evening classes and on-the-spot training.

1 . The fulfillment of the long-term development program depends greatly on the availability of the technical personnel, both of secondary school and university level. The development projects envisaged by the Second Plan, as well as social services and public administration, will need to employ about 1,500 college and university graduates. The University has to make efforts to contribute to the education of the necessary

personnel, and to establish new colleges such as engineering, technology, medical colleges and others. The scholarship program for education abroad should be co-ordinated with the University program, and both of them with the Second Plan requirements.

13. Public Health services should be extended and gradually decentralized through Provincial Public Health Departments, health centers, health stations, and provincial hospitals, with the view of meeting the growing needs of the population. Prevention of disease should be more emphasized during the Second Five Year Plan by establishing decentralized general health services. The Government will supervise and co-ordinate both the private and Government supported health activities, ensure uniform standardization of health services, endeavor properly to distribute the health institutions with the aim of avoiding duplication and achieving the optimum results with the available resources. It will also provide new facilities for health personnel training programs, particularly to meet the needs of the local health centers and clinics.

14. The Malaria Eradication Project, which envisages an operational period of about 10 years, should be widely implemented during the coming five years. The experience already gained should be extended and improved so as to achieve and maintain efficiency. Other specific projects which have been started during the past period, such as yellow-fever vaccination, the anti-syphilis campaign, the struggle against active tuberculosis, the leprosy control program, control measures concerning trachoma and communicable eye diseases, etc. will be continued and improved during the Second Five Year Plan period. With a view to reducing the communicable diseases, both the preventive measures, which are to be mainly a function of the health centers, and the vaccination program, will be improved. The final goal of the public health services is to improve the health of the Nation and to reduce [illegible]. Due to the importance of infant mortality, efforts should be made to reduce it to a reasonable level by promoting both pre-natal and post-natal care by the most appropriate methods.

15. Social [illegible]. Along with the economic growth and in conformity with the [illegible] requirements, other social services and development schemes will be [illegible] and extended. The Government will pay due attention to the Community Development Program, with the aim of improving the social conditions of the [illegible] community and of encouraging local initiative and [illegible]. The Public Servants Pension Scheme will be implemented in the [illegible] of the Second Plan period, and social insurance schemes encouraged for [illegible] of other sections of urban population. Improvements should be made both in urban and rural housing conditions by the technical assistance of the Government, and by up-to-date regulations. Projects concerning protection of handicapped and disabled people will be initiated [illegible] the Government humanitarian institutions, and by local initiative. It is to be expected that the economic development will change the traditional pattern of life by increasing the standard of living, offering more employment opportunities and

through the changing social structure. The Government will encourage the overall social development not only by direct action and assistance, but also by making appropriate rules and regulations.

Gross National Product.

16. In the course of the elaboration of the Second Five Year Plan, the Office of the Planning Board has estimated the 1949 and 1954 Gross National Product and forecast the Gross National Product for 1959, all in 1953 prices. When working out the estimates the Office has been faced with enormous difficulties, due to the lack of reliable statistics. Statistics are lacking for many sectors, e.g. for agriculture, domestic trade, catering, etc., so that the Office had to use indirect methods to estimate the contribution of the sectors concerned to national production. When estimating the gross national product both the monetary and nonmonetary sectors had been taken into account. In this way the gross national product is estimated over all kinds and all types of economic activity, including, of course, the nonmonetary economy such as agricultural production intended for personal consumption of the farmers, etc. The 1959 gross national product had been forecast starting from the 1954 estimate by integrating all production and investment programs into one consistent whole.

17. The implementation of the Second Five Year Plan, according to the Planning Office estimates, will result in a growth of the gross domestic product from Eth.$ 2,130 million in 1954, to Eth.$ 2,632 million in 1959. The average rate of growth of domestic economy is estimated at 4.3 per cent per annum. The gross national product, which includes the economic relations with the rest of the world, is also estimated to increas from Eth.$ 2,166 million in 1954, to Eth.$ 2,718 million in 1959, at an average rate of 4.6 per cent per annum. National per capita gross product accordingly will increase from Eth.$ 103 to Eth.$ 119, at a rate of growth of 2.8 per cent per annum.

18. According to the priorities adopted for the Second Five Year Plan, the growth of the various sectors of economy, and of social services, has been estimated as follows :

## Gross National Product 1949 - 1959

( Eth.$ million, 1953 prices )

| | 1949<br>1957 | 1954<br>1962 | 1959<br>1967 | Index No. 1959/1954 | Rate of Growth |
|---|---|---|---|---|---|
| Agriculture | 1 328.0 | 1 453.6 | 1 632.3 | 112 | 2.3 |
| Forestry | 18.3 | 23.3 | 28.1 | 121 | 3.8 |
| Fishing & Hunting | 1.1 | 1.8 | 2.9 | 161 | 10.1 |
| Mining | 1.0 | 1.4 | 11.6 | 829 | 52.6 |
| Power | 4.4 | 7.5 | 18.2 | 243 | 19.4 |
| Manufacturing | 24.7 | 34.9 | 116.7 | 334 | 27.3 |
| Handicrafts & Cottage Ind. | 60.9 | 77.0 | 93.1 | 121 | 3.9 |
| Building & Construction | 24.2 | 44.5 | 72.4 | 163 | 10.2 |
| Transport & Communication | 69.7 | 109.3 | 151.1 | 138 | 6.7 |
| Trade & Commerce | 110.3 | 136.1 | 171.1 | 126 | 4.7 |
| Catering & Tourism | 20.8 | 25.0 | 33.2 | 133 | 5.8 |
| Financial Intermediaries | 10.5 | 15.4 | 26.6 | 173 | 11.6 |
| Education & Culture | 11.2 | 28.0 | 48.0 | 171 | 11.3 |
| Health | 6.0 | 14.0 | 22.5 | 161 | 10.0 |
| Community Development | - | 0.9 | 7.4 | 822 | 42.8 |
| Other Services | 2.3 | 4.9 | 6.0 | 123 | 4.1 |
| Government | 63.3 | 95.4 | 119.4 | 128 | 4.6 |
| Housing | 19.6 | 25.8 | 35.4 | 137 | 6.5 |
| Others | 26.0 | 31.6 | 36.0 | 114 | 2.6 |
| Gross Domestic Product | 1 802.3 | 2 130.4 | 2 632.0 | 123 | 4.3 |
| Rest of the World | - 30.1 | + 35.4 | + 85.5 | - | - |
| Gross National Product | 1 770.2 | 2 165.8 | 2 717.5 | 125 | 4.6 |

19. It should be noted that the fastest rate of growth is anticipated for the sectors which form the industrial groups in the broad sense, and which are actually the most propulsive ones. A high rate of growth is also forecast for building and construction, due to their role in the implementation of the investment program. As far as rate of growth is concerned, high priority is attributed to the social and economic services

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which have to assist the long-range development. In spite of the slow pace of growth of agriculture, which is a consequence of the prevailing subsistence sector, its contribution to the gross domestic product is the biggest; agriculture is expected to contribute one third of the five-year national product increment.

20. The development foreseen by the Second Five Year Plan shoul bring further changes into the structure of the national economy. This is in fact, along the lines of gradually transferring the Ethiopian economy from agricultural to an agro-industrial one. In the course of the Second Plan the relative share of the non-agricultural sectors will have to increase, while the relative share of the agricultural and other primary sectors industries (forestry, fishing and hunting) must decrease.

Gross Domestic Product 1949 - 1959

Percentage Share of the Main Sectors

| Sector | 1949 | 1954 | 1959 |
|---|---|---|---|
| Primary | 74.7 | 69.6 | 63.2 |
| Secondary | 6.4 | 7.7 | 11.8 |
| Tertiary - economic | 11.7 | 13.4 | 14.6 |
| Tertiary - noneconomic | 3.6 | 4.9 | 5.9 |
| Government | 3.6 | 4.4 | 4.5 |
| All Sectors | 100.0 | 100.0 | 100.0 |

The changes in the composition of the gross national product anticipated by the Plan are the outcome of fastest growth of the secondary sector, which, with its 88 per cent increase over the next five years exceeds the growth of the tertiary sectors (34 and 47 per cent), of the Government (23 per cent), as well as of the primary sector (12 per cent).

21. The distribution of the gross national product is expected to change over the next five years in favor of capital formation, both private and public, as well as in favor of increase in stocks.

## Distribution of the Gross National Product 1954 - 1959

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| Use |  | 1954 |  | 1959 |  | Rate of Growth |  |
|---|---|---|---|---|---|---|---|
|  |  | Eth.$ million | % | Eth.$ million | % |  |  |
| Private Consumption Expenditure | 1824 | 1 750.9 | 80.8 | 2 056.8 | 75.6 | 3.3 | 2079.1 |
| Government Consumption Expenditure | 162 | 181.0 | 8.4 | 259.7 | 9.6 | 7.5 | 258.7 |
| Gross Fixed Capital Formation of Private Enterprises | 95.4 | 154.1* | 7.1 | 248.0 | 9.1 | 9.8 | 224.8 |
| Gross Fixed Capital Formation of Government & Public Enterprises | 77.6 | 73.2* | 3.4 | 138.0 | 5.1 | 13.5 | 128.0 |
| Increase in Stocks | 66 | 6.6 | 0.3 | 15.0 | 0.6 | 17.8 | 15.0 |
| Total | [illegible] | 2 165.8 | 100.0 | 2 717.5 | 100.0 | 4.6 | 2716.6 |

The relative growth of the capital formation is undoubtedly a good indicator of the economic development. As concerns the public and private capital formation, it should be pointed out that the increase in public capital assets will be smaller by about Eth.$ 50 million, as the Government is expected to sell public enterprise shares to that amount. Private capital formation should in fact be increased accordingly. Although the rate of growth of private consumption expenditure is estimated to be the lowest, it will provide for both the increase in consumption due to the growth of population, and for improvement in standard of living.

22. To summarize, it must be pointed out that the implementation of the Second Five Year Plan should bring improvement into the Nation's economic and social life in all respects. Economic activity as a whole, as well as all the industries and social services, will grow and diversify. The rate of growth of all the industries and social services over the next five year period will be higher than during any other period in the past. Per capita production will be bigger than ever at the end of the Second Plan, allowing for larger consumption and larger saving. The development trend which began in the course of the First Five Year Plan will continue and will be, in addition, more accelerated. Further changes in the structure of the national economy will occur, changes which are not only a sign of progress, but a sound foundation for future development. When properly implemented in its main targets, the Second Five Year Plan's economic development will create better conditions for future growth, as

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* Including savings and depreciations carried over from 1953

* [illegible] appr. 10 m

well as for the fulfillment of the long-range development program.

Investment Requirement

23. The implementation of the Second Five Year Plan will require additional labor force and equipment. It is true that the existing productive capacities might be much better utilized through a higher labor efficiency and a proper organization, resulting in incremental production of goods and particularly services. However, considerable addition to production, as anticipated by the Plan, cannot be achieved without further capital investment and employment, nor can the long-range development be ensured. Only the introduction of new equipment and additional skilled labor will be able to increase production and change the traditional pattern of economy.

24. It is an important feature of the Second Plan's investment program that it should not only simply add to the existing traditional productive means. The investment program aims at changing the present patter of technology and economy and at introducing modern equipment, which should contribute to the productivity of human labor and provide the Nation with more goods and services. In fact, the investment program designed in the framework of the Second Five Year Plan should extend, on a large scale, the utilization of contemporary technology in all the propulsive sectors. Obviously, the development program cannot neglect the improvements in the traditional methods of production, especially with regards to the immense subsistence sector of agriculture, handicrafts, small-scale industry and various services, but here the program will be mainly faced with the human factor. As far as equipment for propulsive sectors is concerned, the progra should endeavor to introduce modern equipment, with the aim of improving both the methods and techniques of production.

25. Technical aspects of the investment program emphasize the importance of its fulfillment. Out of the total investment in economic sectors in value terms, more than two thirds are intended to intensify the technical progress in the propulsive industries, whereas only one sixth is intended to improve the traditional technology, and one sixth to enable trade and commerce and similar services to keep pace with the growing economy. In terms of productive power, efficiency, and production, the progress of technology is perhaps even more significant, due to combined direct and indirect effects of the industrialization and modernization of agriculture and other sectors. Finally, the technical progress will undoubtedly have valuable influence on the labor force, which will have to adjust itself to the new techniques and abandon the traditional ones.

26. Emphasizing the technical progress is not only due to long-term considerations, but is largely conditioned by directions of the economic development. Industrial branches, such as cement, iron and steel, glass, chemical industry, etc., have to follow the capital intensive pattern of technology, because the previous labor-intensive methods no longer exist. The same is true for the exploitation of the mineral wealth,

which is expected to be an important activity. Meat processing and other industries intended for export have to be properly equipped to be able to compete on the foreign market, and also to produce goods of standard quality, which would be acceptable and reasonably priced. Finally, if the existing virgin land is to be brought to cultivation in a short time and with sufficient efficiency, modern methods will have to be introduced as the most appropriate ones.

27. Technical progress of the propulsive sectors will not clash with the labor-intensive schemes which are to be implemented into the other sectors. Population pressure does not exist in this country, therefore the transfer of the labor force from agriculture to nonagricultural industries is not the most urgent problem. Consequently, the labor-intensive investment scheme does not have to be implemented at any cost and by neglecting the technical progress and propulsive sectors. Labor-intensive schemes will have sufficient place in the rest of the economy. Not only in subsistence agriculture, handicrafts, trade, and small-scale industry, but also in road construction, building of residential structures, and other activities where labor can be more economically utilized than the equipment, the labor intensive schemes must be insisted upon. Even in the modern industries, always when the nature of works permits it, locally available labor has to be used instead of machinery.

28. Total Investment anticipated for the Second Five Year Plan amounts to Eth.$ 1,696 million. It is exactly double the actual investment during the First Five Year Plan extended period. The average annual investment foreseen for the Second Plan works out at about Eth.$ 339 million, while the First Plan annual investment was about Eth.$ 153 million. If compared with the First Plan's average annual investment, the anticipated one for the Second Plan is 2.2 times greater. The Second Plan's investment program counts on Eth.$ 1,451 million of monetary investment and Eth.$ 245 million (about 14 per cent) of investment in kind. This points to the importance which is given by the Second Plan to the labor-intensive methods as far as the investment program is concerned.

29. Out of the total investment, Eth.$ 1 262 million (about three fourths of the total) should be assigned to the productive sectors and other economic activities, Eth.$ 394 million should be allotted to the social and other services, and Eth.$ 40 million should be kept as an investment reserve. The structure of investment targets is intended to provide the economic sectors with sufficient money since they have to carry the greatest burden in the implementation of the Second Plan production targets.

## Financing the Development

30. In addition to the investment requirement, the financial scheme for the Second Five Year Plan has to provide necessary means for financing the social services and various development programs, as well as

1451

the public administration. In addition to Eth.$ 1,451 million for monetary investment, financial means amounting to Eth.$ 1,100 million for recurrent expenditure on social services, economic services,and public administration, as well as Eth.$ 105 million for foreign debt repayment and others, are estimated for the Second Five Year Plan period. Thus, excluding the running costs of economy, total development and administration expenditures during the Second Five Year Plan period are estimated at Eth. $ 2,656 million.

31. In the total amount of money to be expended over the Second Five Year Plan period, domestic sources are expected to participate with a sum of Eth.$ 2,032 million, or with 76 per cent of the total expenditure, while the foreign sources are expected to participate with Eth.$ 639 million, bearing 24 % of the planned expenditure. Thus the burden which the national economy has to carry in order to reach the planned goals is more than considerable. It calls for extraordinary efforts of the whole nation, and requires sound economy in spending.

## Labor Force and Employment

32. In a growing economy, such as the Ethiopian, labor force is becoming of increasing importance. Due to the growth of population during the Second Five Year Plan there will be enough labor force to meet the demand of the national economy. However, the composition and skill of the labor force is not in conformity with the requirements of industry and other nonagricultural activities. Thus, although the labor force as a whole is considered as an abundant factor of development, its skilled part will be very scarce.The educational system which,in spite of considerable improvement is still inadequate, is expected only partly to meet the requirements of the national economy.

All this points to the urgency of establishing a national labor force training program, which will combine both the regular and extraordinary training schemes to be launched to meet the growing demand of the economy and social services.

33. By their nature two different main problems in respect of the labor force and employment have to be distinguished. The first concerns nonagricultural employment, particularly that in the organized sector of the national economy and in social services. The other is related to the subsistence part of agriculture, as well as to the unorganized sector. Owing to the lack of statistics, both problems could not be sufficiently analysed to allocate properly the Second Five Year Plan targets concerning labor force and employment.

34. Organized Sector. Considering its production targets and type of equipment, the organized sector of economy should employ,primarily, skilled operatives as well as an additional technical, administrative, and clerical staff of University and secondary school education level. Total employment in the organized sector-including the large-scale agricultural

farms, mining, electricity, manufacturing, financial institutions and others- should increase from 36 thousand persons in 1954, to 65 thousand in 1959. The technical and administrative personnel increase is estimated at 690 persons with college or university degrees, and 3,000 persons with secondary technical school diplomas. In addition to the requirements of the economic sector, social services will employ, in 1959, about 450 more college and university graduates and 3,500 secondary school graduates, while public administration will employ respectively 350 and 2,100 persons. The total increment in technical and administrative personnel comes to about 1,500 college and university graduates and 8,600 secondary school graduates. The requirements of the organised sector for technical and administrative personnel will be difficult to meet, and substitute personnel should therefore be trained, to replace the graduates who are needed but not available.

35. Employment projection concerning the operations in the organized sector predicts an increment of 33,000 people. In total there will be an additional demand over the next five years for 2,700 skilled operatives, 29,500 unskilled operatives, and 900 supervisors and foremen. They will have to be trained either in vocational schools or by other methods, such as on-the-spot training, evening courses, etc. Having in view the shortage in educational and training facilities, it is to be expected that the existing enterprises, Government Agencies as well as the prospective investors, will assist in the training of the technical personnel and operatives. With a view to avoiding the shortage in skilled labor, as well as an unjustified increase in wages and salaries, the Government will encourage any kind of vocational and out-of-door training by the most appropriate methods.

36. Unorganized sector.- The growth of employment in the unorganized sector, whether of a family type or of a wage-earner type, is expected to be much faster, due to the growth of population. To increase the labor efficiency in this sector, no educational and training facilities will be available, except the primary and secondary schools, which will have to promote practical and comprehensive education. Therefore, other training methods should be introduced and extended in conformity with the needs of the urabn and rural economy.

37. The new entrants in the urban economy should be given the opportunity to take part in the apprenticeship scheme which should be extended through all the handicrafts and arts as well as through trade and commerce. This should be linked with vocational education and evening classes, which are to be introduced into the urban localities within the existing secondary or vocational schools. In-service training should also be recommended, to train in various jobs the adults already employed. The Chamber of Commerce is expected to organize professional courses in bookkeeping, acounting and similar subjects required primarily by private small and medium scale business.

38. As to the agricultural labor employed on small holdings, it is of paramount importance to introduce new methods and techniques in farming and animal husbandry. Through its competent agencies, the Government will extend appropriate schemes to expand know-how, and will provide more efficient tools and implements. Primary education will also have to support the endeavors to raise labor efficiency, by contributing to general education and literacy, and by demonstrating new methods and techniques. All this should result in an increase in labor input, in upgrading the agricultural work, and in raising the labor productivity.

39. Voluntary Labor Campaigns.- The introduction of new methods and techniques will gradually reduce the wastage of labor. However, the labor surplus in agriculture is such that it will be diminished only after transfering a large segment of the present agricultural population into nonagricultural activities. This is, indeed, a long-term process so that the Second Five Year Plan will have to count on idle hands in the countryside being used for development works. Besides the housing and feeder road schemes, for which provisions have been made in the investment program, other voluntary labor campaigns should be launched, particularly to improve the local water supply, drainage, local markets, etc. National Community Development is considered the most adequate organization to mobilize the local labor force for such projects, and it has therefore to proceed with very different labor intensive development projects. The psychological effects of the labor campaigns should also contribute to the national development, because people will become more aware that improvement can come only by additional labor and efforts.

## Consumption and Standard of Living

40. Whereas the gross national product is expected to grow at 4.6 per cent per annum, private consumption should grow at 3.3 per cent. The rate of growth of consumption anticipated for the Second Five Year Plan period is, in fact, the consequence of the policy of an accelerated growth of economy:if investment should be bigger to ensure the rise of production within the given growth of the national production, the increase in consumption should be relatively slower. This, by its nature, long-term policy will allow also for an increase in personal consumption, even in the course of the Second Five Year Plan period. Per capita consumption is expected to rise from Eth.$ 83 in 1954, to Eth.$ 89 in 1959, or by rate of growth of 1.5 per cent, which is, in the present economic conditions, a good rate of progress.

41. Increase in the Standard of Living.- The growth of personal consumption forecast for the Second Plan will not only expand the present volume of consumption, but should also bring about a diversification of the consumption pattern, which arises from the changing wants of the population. Considering the level of national per capita income, the calorific value of the nutrition seems to be quite high, and the calory intake per

day is not expected to grow fast : it should increase from about 2,170 calories in 1954, to about 2,210 calories per capita daily in 1959, which level is higher than in many other developing countries. Accordingly, the consumption of the staple food, cereals, is not foreseen to increase.

Estimated Per Capita Consumption 1949 - 1959

| Item | Unit | 1949 | 1954 | 1959 | Index Number (1954=100) |
|---|---|---|---|---|---|
| Cereals | kg. | 183.0 | 184.0 | 185.2 | 100 |
| Meat | kg. | 15.5 | 16.0 | 17.0 | 106 |
| Sugar | kg. | 1.0 | 1.8 | 2.3 | 128 |
| Cotton Textiles | $m^2$ | 1.4 | 2.3 | 4.3 | 188 |
| Footwear | pair | 0.2 | 0.3 | 0.5 | 166 |
| Electric Power | kWh | 3.7 | 6.9 | 15.5 | 225 |
| Cement | kg. | 1.8 | 2.5 | 4.5 | 180 |

On the other hand other consumption items, particularly clothing and footwear, are expected to be consumed in much bigger quantities. The change of consumption pattern is a very encouraging sign of improvement in the standard of living. It is true that the present standard of living of the largest part of the population is low, exception being made for its nutrition component. The basic wants are far from being satisfied, so that any kind of per capita improvement has a great significance.

42. It should be noticed that the highest growth of consumption is anticipated for the manufactured consumers' goods - which were previously not available on the domestic market, or not in sufficient quantities. Thus, the industrial development will contribute to the improvement of the standard of living even in the coming period, and will do so much more in the course of the subsequent five year plans. Due to the prevailing low standard of living, the Second Five Year Plan does not provide for a large increase in the consumption of durable goods. Durable goods such as furniture, radio sets, household textiles, bicycles and vehicles and others are still in limited use in rural areas, and the quantities needed will be either produced on a small-scale basis, or imported, to meet the urban demand. In any case, the consumption of durables has not been estimated to have an important growth in the framework of the standard of living over the next period.

43. Housing Conditions.- Investment requirements for housing over the Second Five Year Plan have already been discussed. Here it should be pointed out that housing conditions, which form a very important part of the living conditions, should be improved in the course of the coming period, both in urban and rural areas. In spite of the moderate standards which are recommended, housing facilities should become better for a larger segment of urban and rural population than they are at present. Together with the construction of new structures, improvement in the functional distribution of space should be achieved, particularly in the rural areas, and for low-cost housing. Introduction of better household equipment and furniture in rural areas has also to be encouraged through the National Community Development scheme.

44. Social Services and Standard of Living.-The standard of living should be improved also by the extension of social services, in particular the public health, education and social security programs. Of course, social services are not to be considered as personal consumption, but since they contribute in various ways to better living, they should be seen as a part of general consumption, which is an important component of the standard of living. The growing demand for new schools, health centers and other social services, especially in the areas which had already been influenced by progress, coincides with the intention of the Government to extend the social services. Their growth, as anticipated by the Plan, is much faster than the growth of personal consumption, due to the fact that social services are lagging behind consumption, while the national progress calls for their fast improvement.

45. Standard of Living Expenditure.- It is difficult to estimate the improvement in the standard of living, particularly since statistical data are lacking. Being a very important factor and the major objective of the economic and social development the standard of living and its growth should be estimated, even by an approximate method.

## Estimated Expenditure on Standard of Living 1954 - 1959

(Eth.$ million)

| Expenditure on | 1954 | 1959 | Index No. 1954=100 | Rate of Growth |
|---|---|---|---|---|
| **Recurrent Expenditure** | | | | |
| Private Consumption | 1 750.9 | 2 056.8 | 117.5 | 3.3 |
| Pension Scheme Premiums | 0.4 | 3.0 | 750.0 | 49.6 |
| Total Personal Consumption | 1 751.3 | 2 059.8 | 117.5 | 3.3 |
| Public Health | 18.9 | 35.5 | 188.0 | 13.4 |
| Education & Culture | 25.6 | 49.7 | 194.0 | 14.2 |
| Community Development(50%) | 0.7 | 4.0 | 570.0 | 41.7 |
| Other Social Services | 13.0 | 25.9 | 200.0 | 14.8 |
| Total General Consumption | 58.2 | 115.1 | 200.0 | 14.7 |
| Total Recurrent Expenditure | 1 809.5 | 2 174.9 | 120.0 | 3.5 |
| **Capital Expenditure** | | | | |
| Housing | 45.0 | 60.0 | 133.0 | 5.9 |
| Social Services | 9.2 | 26.3 | 286.0 | 23.4 |
| Total Capital Expenditure | 54.2 | 86.3 | 159.0 | 9.7 |
| GRAND TOTAL | 1 863.7 | 2 261.2 | 122.0 | 3.9 |

Taken as a whole, the capital and recurrent expenditure, all of which contribute to the standard of living, should grow over the next five years at an average annual rate of 3.9 per cent. This should be compared with the 3.3 per cent rate of growth of personal consumption, the 14.7 per cent rate of growth of general consumption, and the 9.7 per cent rate of growth of investment influencing the living conditions.

46. The policy of the Second Five Year Plan emphasizes the general consumption for obvious reasons. In the prevailing Ethiopian circumstances where there is no shortage of food and climatic conditions are favorable, but educational, health, as well as other social services are lacking, general consumption must be given priority. Such a policy is not only justified from the point of view of the overall national progress; it is also being supported by the desires of the population, particularly the rural people, who consider education and medical care as a sign of progress and a better future.

### Phasing Programs

47. Economic, as well as social development is a continuous process in which each subsequent phase has to be supported by the achievement of the previous one. Only that kind of progress which arises from a

sound foundation due to the previous development can be a basis for further progress. This is equally true for the economic undertakings and social services, as well as for the public administration. Moreover, the development of various sectors has to be mutually co-ordinated so that the growth of each sector can derive benefit from the development of all the other sectors involved. The economic and social development should therefore be synchronized and integrated, and the phasing of programs and projects should be such as to maximize the results, with minimum costs and efforts.

48. When elaborating the sectorial projects for the Second Five Year Plan, efforts have been made properly to distribute the various development targets within the five-year period. Sectorial projects have been worked out year by year, and they form an important part of the Second Five Year Plan documentation. However, when integrating and balancing the sectorial projects, adjustment had necessarily to be made in order to rank the priorities and to allocate the resources. Many sectorial projects, particularly of social services and public administration had to be extended for two, three, or even more years with the view to ensuring the resources, and to synchronizing the sectorial development with the overall progress. Thus the adjusted sectorial projects have to be considered as the tentative time table of the Second Five Year Plan.

49. A Five Year Plan, being a medium term and master plan, cannot foresee all the details needed for its day to day implementation. In addition, the five-year period might bring unforeseen events which might have an impact on the planned development, and disturb the anticipated phasing. Therefore the annual plans and programs have to reassess the economic and social situation, and to adjust the phasing of particular programs and projects to the existing economic conditions. Indeed, the broad lines of succession established and stated in the Second Five Year Plan have to be followed when working out the annual plans, for the plan is a whole, not only in respect to its targets, but also in respect to timing.

50. With the aim of deriving maximum benefits from a planned and sound social and economic development, phasing of various programs and projects should be based on the following principles:

(i) the execution of each project should be started only after a careful analysis has been made of economic justification, and all factors of production, such as raw material, power, labor force and others have been ensured;

(ii) as far as the combined projects are concerned, which integrate single projects in different industries (such as agriculture and processing industries, mining, power and manufacturing industry, etc.) they have to be properly worked out in respect of the beginning and ending of each project, and co-ordinated so as to ensure the production of each project on time;

(iii) it is particularly important that the phasing of projects should be co-ordinated with balancing of power and raw material, both domestic and imported;

(iv) considering the scarcity of the financial resources, the phasing of programs and projects should avoid great accumulation of construction in any given year, which might unbalance the financial program; on the other hand, it is very important to ensure the inflow of financial resources, particularly the foreign ones, on time;

(v) due to the shortage in skilled labor and technical and managerial personnel, the labor force program should be co-ordinated with each development project, so as to have the necessary labor available at the end of construction;

(vi) when working out the annual plans and programs, priority should be given to the projects under construction, with a view to starting production at an earliest date.

51. All the Government Departments and Agencies will have to elaborate their five-year programs into annual programs, following the phasing given in the Second Five Year Plan and the criteria stated above. Private concerns are recommended to co-operate with the Government Departments concerned in establishing their own development programs, in order to avoid any unnecessary work and duplication. Through its Planning Agency, the Government will co-ordinate the sectorial programs in respect of time and targets, according to the priorities set forth by the Plan. This should be the best method of establishing an optimum and properly timed program for a successful implementation of the Second Five Year Plan targets.

## Flexibility and Key Projects

52. The Second Five Year Plan is a national document which summarizes the national targets to be fulfilled during the next five years; it anticipates the progress to be brought into the Nation's life, and ranks the order of priority.As a policy document the Second Five Year Plantraces the broad lines of development, foresees the growth and structural changes, and allocates the necessary resources. It is a comprehensive document of the national development which should stimulate all the citizens to implement it. The Second Five Year Plan is by no means considered to be a rigid program which prevents individual and group initiative; it is a flexible program which should embrace all efforst and undertakings, private, public and co-operative, domestic, as well as foreign, for speeding up the economic growth and social progress of the country.

53. When working out the sectorial programs for the Second Five Year Plan broad consultations have taken place, with the aim of incorporating into the programs the development intentions of the business community, the local authorities and Government Agencies concerned. However, it

might happen that a project included in the program will not be accomplished due to unavoidable reasons, or that the institution of some other project might be proposed. As a flexible national program the Second Five Year Plan should allow changes and improvements to be made, providing the basic balances of the Plan are not upset. All changes or improvements to be proposed should consider the balances which have been established for the coming period, particularly the foreign trade balance, the financial scheme for the Second Five Year Plan, the energy and raw material balances, and the skilled labor force balance.

54. Thanks to its flexibility, which provides sufficient space for further improvement in the programs, the Second Five Year Plan can encourage the factors concerned to expand their activities even above the targets which have been set forth. If capital and labor, as well as raw material and demand are present, no limits should be set to the extension of the economic activity. The Government Agencies concerned will have, therefore, to study very carefully all the proposals dealing with new projects and undertakings.

55. However, there are some schemes and projects which by their nature carry the whole development program, and therefore should not be changed or neglected. The Government will undertake all appropriate measures to implement the projects and schemes that are of key importance, with a view to facilitating the fulfillment of the Plan as a whole. Particular attention and care, both by the Government and the other factors involved, should be given to the following :

(i) to implement the financial scheme for the Second Five Year Plan, its private and public components, as well as domestic and foreign ones;

(ii) to improve the land tenure system, implement the program of the agricultural services and Community Development, and to extend the modern large-scale farming and animal husbandry;

(iii) to implement fully the programs concerning the studies and prospecting for minerals, as well as the opening of new mines;

(iv) to ensure sufficient electric power for the Second Plan period and its expansion in the future;

(v) to establish the key projects in manufacturing industry, particularly the meat and other agricultural raw material processing industries, the building material industry, and the consumers' goods industries. Special attention should be given to the coordinated iron and steel industr the oil refinery and the metal processing industry;

(vi) to fulfil the basic highway program and feeder road program; to complete the existing ports and to establish the nucleus of the Ethiopian commercial fleet;

(vii) to increase the exports, particularly of manufactured goods, as well as to ensure the import of capital goods and goods in process;

(viii) to train the technical and managerial personnel, as well as the skilled operators, needed for the implementation of the preceding programs.

56. By stating these priorities the other programs and schemes are by no means neglected. The programs listed above are of capital importance, because they have to be implemented as a whole, while the other programs are of a more flexible nature. The Government, as well as the Government Agencies concerned, will insist on the implementation of all the programs concerned, since only a coordinated socio-economic development can bring about the results expected from the fulfillment of the Second Five Year Plan.

# CHAPTER 5

## FINANCE

1. The implementation of the development tasks of the Second Five Year Plan largely depends upon appropriate financial policies and the setting up of adequate and efficient financial organizations. These will have to provide all the sectors of the nation's economic and social activity with the necessary amount of financial resources. The implementation of the tasks set by the Second Five Year Development Plan demands the allocation of Eth.$ 1,451 million for investment purposes and Eth.$ 1,205.3 million for recurrent costs of economic, social and administrative services; The sum total of these expenditures, which amounts to Eth.$ 2,656,3 million, undoubtedly is an obligation which requires great national sacrifice and determination.

Second Five Year Development Plan Financial Resources and Outlays

(In million of Eth.$)

| Source | Amount | Expenditure | Amount |
|---|---|---|---|
| A. Domestic Sources | | A. Investments | |
| 1. Depreciation and Profits | 416.5 | 1. Economic Activities | 1 280.3 |
| 2. Budgetary Revenue | 1 386.4 | 2. Services: | — |
| 3. Bank Loans | 199.8 | a) Public Administration | 28.5 |
| 4. Other Domestic Sources | 15.1 | b) Social Services | 79.8 |
| | | c) Economic Services | 12.4 |
| Total: | 2 017.8 | 3. Contribution to Development Fund | 10.0 |
| B. Foreign Sources | | 4. Investment Reserve | 40.0 |
| 5. Public Loans | 339.5 | Total : | 1 451.0 |
| 6. Private | 177.2 | | |
| 7. Grants in Aid | 121.8 | B. Recurrent Costs | |
| Total: | 638.5 | 5. Public Administration | 627.3 |
| | | 6. Social Services | 376.4 |
| | | 7. Economic Services | 96.6 |
| | | 8. Debt Repayments | 95.0 |
| | | 9. Budgetary Reserve | 10.0 |
| | | Total : | 1 205.3 |
| GRAND TOTAL : | 2 656.3 | GRAND TOTAL : | 2 656.3* |

* Investment in kind, amounting to Eth.$ 245 million, are not included.

2. The limitation of the financial resources of the Second Five Year Development Plan not only imposes an optimal allocation of resources but also a strict economy in spending. Consequently the national financial

system and particularly the Government financial institutions, have important role to play:

a) In increasing the saving capacity of the nation;
b) In providing the organizations for supplying the necessary financial means;
c) In promoting investment in kind, and
d) In creating sufficient reserves for the maintenance of a smooth and balanced development of the economy.

3. Government expenditures.- Ordinary revenue of the State over the next five years is estimated to be about Eth.$1,131 million and the special revenue Eth.$255 million, in total Eth.$1,386 million. The anticipated increase in State revenue counts on the growth of economic activity, higher efficiency of tax collecting agencies and improvement in the tax system. The expanded activity of the public sector is also considered as a growing source of State revenue.

Budgetary Revenue and Expenditure 1955-1959

(In millions of Eth.$

| Revenue | Amount | Expenditure | Amount |
|---|---|---|---|
| A. Ordinary Revenue | | A. Ordinary Expenditure | |
| 1. Direct Taxes | 311.7 | 1. Public Administration | 627.3 |
| 2. Indirect Taxes | 98.3 | 2. Social Services | 286.5 |
| 3. Customs Duties | 321.7 | 3. Economic Services | 86.8 |
| 4. Federal Taxes | 313.4 | 4. Debt Repayment | 95.0 |
| 5. Earnings of Government Departments and Min. | 51.2 | 5. Budgetary Reserve | 10.0 |
| 6. Other Ordinary Revenue | 35.2 | Total: | 1,105.6 |
| Total: | 1,131.5 | B. Capital Expenditure | |
| B. Special Revenue | | 6. Public Administration | 28.5 |
| 7. Revenue from State Property and Investments | 196.2 | 7. Social Services | 53.7 |
| 8. Sale of Govt. Bonds | 50.0 | 8. Economic Services | 1.4 |
| 9. Other Special Revenue | 8.7 | 9. Investment in Economic Activities | 197.2 |
| Total: | 254.9 | Total: | 280.8 |
| GRAND TOTAL: | 1,386.4 | GRAND TOTAL: | 1,386.4 |

The estimated State revenue is in fact the limit of State expenditure, and therefore of the expansion of the social and administrative services. The total financial obligations of the Budget foreseen by the financial scheme for the Second Five Year Plan period is Eth.$1,386.4 million. Out of this total, Eth.$731 million, or 53 per cent is intended for

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development purposes, including the investment in the public sector as well as the capital and recurrent expenditure on social and economic services. The other Eth.$ 655 million, or 47 per cent, is intended to be used for public administration expenditure, both capital and recurrent.

4. Recurrent expenditure accounts for the greatest part of the total State expenditure. This fact emphasizes the importance of keeping it under control as well of following strictly the principle of economy in expenditure. Public administration, social and economic services will have to be run on the most economic lines with the view to utilizing the available financial resources in the most efficient manner.

State Recurrent Expenditure 1954 and 1959

( In millions of Eth.$)

| Item | 1954 | 1959 | Index No. (1954=100) | Rate of growth |
|---|---|---|---|---|
| Social Services | 42.2 | 70.2 | 166 | 10.4 |
| Economic Services | 13.0 | 23.2 | 178 | 12.3 |
| Public Administration | 116.8 | 137.3 | 118 | 3.3 |
| Foreign Debt Repayment | 9.0 | 25.0 | 278 | 22.7 |
| Others | - | 4.0 | - | - |
| Total: | 181.0 | 259.7 | 143 | 107.5 |

Due to the great need to improve the economic services, particularly the Veterinary Service, Agricultural Extension and others, as well as to maintain properly the increasing road network, economic services are expected to rise at a high rate. Social services, including education and public health, should have also a high rate of expansion. However, the public administration expenditure should increase at a slow rate; improvements in this field will be sought in better organization, adequate distribution of responsibilities, and higher efficiency of the public servants.

5. Foreign Resources.- Due to the magnitude of the development targets anticipated for the Second Five Year Plan, the financial scheme counts on an important inflow of foreign resources, both for capital investment and for financing recurrent expenditure of the social services. Economic Assistance in various forms, as well as the Grant-in-Aid Scheme, had an important impact on the recent development of Ethiopia. It is to be expected that foreign assistance will play the same, and even bigger, role in the next planned period, to facilitate the economic and social development of the country. In working out the foreign assistance program for the

Second Five Year Plan the following consideration had been followed broadly: (a) that the economic development will be supported by the economic assistance of friendly countries, in terms of long-range loans, direct private investment, technical assistance etc.; (b) that the development of social services will be assisted by grants from international agencies, friendly countries and other organizations, to meet a part of the investment and current expenditure.

6. Total foreign resource requirements for the next five-year period and their distribution are estimated as follows:

| | | |
|---|---|---|
| Investment in National Economy | Eth.$ | 517 millio |
| Investment in Services | " | 37 millio |
| Recurrent Expenditures for Social Services | " | 85 millio |
| Total Foreign Resource Requirements | Eth.$ | 639 millio |

It should be pointed out that economic assistance, which must be on an accelerating scale, forms the greatest part of the needed foreign resources. Public loans and private investment are estimated to be Eth.$ 517 million, or about 80 per cent, whereas grant-in aid is Eth.$ 122 million, or about 20 per cent only.This provision points to the need for the country to finance the bulk of development expenditures by its own present and future financial means.

7. Financial Sources for Investment.- The total gross investment for the Second Five Year Plan is estimated at Eth.$ 1,696 million, consisting of net investment amounting to Eth.$ 1,456 million and depreciations to be used for investment of Eth.$ 240 million. The share of depreciation intended for investment is estimated to be over 14 per cent of the total. It appears feasible to use such a large proportion of the depreciation fund, since the capital assets for the many economic aactivities are new. Both public and private concerns are recommended to use for new investment, or for additions and improvements to existing equipment, any surplus of the depreciation fund after normal maintenance costs have been met.

8. Two thirds of the gross investment funds are expected to be made available from domestic sources, while one third comes from foreign sources. However, the share of foreign sources in net monetary investment is estimated at 45 per cent. Such a high share is due to the need to ensure that capital goods imported will be mainly financed by foreign resources. Both the volume of domestic saving and future trends of export suggest such a policy for the Second Five Year Plan.

9. The distribution of the total gross investment by sources is anticipated as follows :

| | | |
|---|---|---|
| Profits and depreciation carried over from 1954 to be reinvested during the period | Eth.$ | 60 mill. |
| Budget | " | 280 mill. |
| Investment in Kind | " | 245 mill. |
| Bank Loans | " | 200 mill. |
| Profits, depreciation,and other funds generated over the period and private savings to be used for investment | " | 357 mill. |
| Total Domestic Sources | " | 1 142 mill. |
| Foreign Sources | " | 554 mill. |
| Total Gross Investment | Eth.$ | 1 696 mill. |

Taking together the profits and depreciation carried over from 1954 and those generated over the period, as well as the private saving, the personal funds of the business community and private investors, the total is estimated at Eth.$ 417 million. This is, in fact, the second most important item among all the sources to be used for investment.

10. When evaluating the sources and directions of investment no advanced studies on saving propensity and investment preferences have been available. Banking, budgetary investment,and foreign loans statistics had to be used as the only source for estimating the future origin and use of savings.This is probably why the personal funds and private savings seem to be underestimated. Out of Eth.$ 417 million arising from this source, Eth.$ 120 million had been estimated for investment in housing, since housing was, and is still, the most attractive field for small investors.Increase in stocks in trade and all other industries has been estimated at Eth.$ 65 million; this is actually the most common form of reinvestment of profits by businessmen. Electricity and Communications are also expected to reinvest the major part of their own fund, Eth.$ 37 million and Eth.$ 18 million respectively. The same has been forecast for railways, air-transport and some industrial and agricultural undertakings.

11. The use of budgetary resources for investment is estimated as follows:Eth.$ 83 million to be used for social services and public administration investment (out of which Eth.$ 29 million will be for public administration)and Eth.$ 197 million for economic activities. The increase in the Government's capital assets after 1959 will, however, be lower, since public enterprise shares worth Eth.$ 50 million are expected to be sold to private concerns. The bulk of Government investment is anticipated as follows: for agriculture Eth.$ 73 million, transport Eth.$ 53 million and manufacturing Eth.$ 47 million. In addition,the Government will invest Eth.$ 6.7 million in mining, Eth.$ 4 million in construction, and small amounts in other sectors.

12. Bank loans have to play an important role in the implementation of the investment program. During the past period the bulk of bank credits has been used for housing, but the Second Five Year Plan estimates that only Eth.$ 10 million should be granted for this purpose. The emphasis

of the credit policy for the Second Plan is being laid on economic activities and over 90 per cent of the total long-term credits should be given to the economic enterprises. Nearly one half of the bank credits (Eth.$ 95 mill.) sho be used by domestic and foreign enterpreneurs, as well as by co-operative and public undertakings, for the development of agriculture. Eth.$ 44 million is tended for industrial investment, and Eth.$ 23 million for transport. Bank loa to be used for investment in hotels and other catering undertakings are esti ted at Eth.$ 7.5 millions, while Eth.$ 8.0 million will be for trade and commerce.

13. Although investment in kind may be used in many economic activities, the Second Five Year Plan anticipates that only subsistence agriculture housing and (in part) feeder road construction should depend on it. It is assumed that works worth Eth.$ 120 million will be carried out to build rural and some urban housing, while investments in kind in agriculture are estimate to be about Eth.$ 113 million, and in feeder roads Eth.$ 12 million.

14. Allocation of Investment.-The investment program for the Secon Five Year Plan period anticipates the following total investments and their allocation :

**Allocation of Investments for the Second Five Year Plan**

| Sector | Millions of Eth.$ | As per cent of total Investment |
|---|---|---|
| Agriculture | 354.7 | 20.9 |
| Forestry | 7.0 | 0.4 |
| Fishing and Hunting | 1.3 363.0 | 0.1 |
| Mining | 74.0 | 4.4 |
| Power | 57.8 | 3.4 |
| Manufacturing | 318.5 | 18.8 |
| Handicrafts & Cottage Industry | 5.0 | 0.3 |
| Building & Construction | 9.0 | 0.5 |
| Transport | 284.9 | 16.8 |
| Communications | 31.5 316v | 1.9 |
| Trade & Commerce | 22.0 | 1.3 |
| Catering & Tourism | 21.0 | 1.2 |
| Financial Intermediaries | 3.5 | 0.2 |
| Education & Culture | 30.2 | 1.8 |
| Health | 38.9 | 2.3 |
| Community Development | 10.8 | 0.6 |
| Other Services | 12.4 | 0.7 |
| Government | 28.5 | 1.7 |
| Housing | 250.0 | 14.7 |
| Others | 20.0 | 1.2 |
| Increase in Stocks | 65.0 | 3.8 |
| Total : | 1 646.0 | |
| Contribution to Development Fund | 10.0 | 0.6 |
| Investment Reserve | 40.0 | 2.4 |
| GRAND TOTAL : | 1 696.0 | 100.0 |

Out of the total amount of Eth.$ 1,696.0 million, Eth.$ 1,262 million should be assigned to investments in economic activities, while Eth.$ 394 million has to be alloted to the investment in the service-rendering sectors. The remaining amount of Eth.$ 40 million should be kept as an investment reserve.

15. Because it provides the largest production increment both in terms of food, raw material, and goods for export, agriculture is given the highest priority in the investment program. Total investment in agriculture is estimated at Eth.$ 355 million. It is expected that the farmers' contribution in labour will be of great significance, so that the investments in kind are estimated at Eth.$ 113.0 million. This will call for very strong support and assistance by the Government in the form of a Community Development scheme, Extension and Veterinary services, etc., and also for the initiative and close co-operation of the farmers with the Government. Monetary investment in agriculture, estimated at Eth.$ 242 million, is intended for various surveys (Awash, Blue Nile, Wabi Shebelli, etc.) and for irrigation schemes which are of longe-range nature. Immediate benefits have to be expected from the investment in large-scale farms, for which Eth.$ 127 million should be expended. This segment of agriculture seems to be the most propulsive one, since it must increase the production of industrial crops and supply sufficient cattle for the processing industry.

16. The industrial sector as a whole requires the investment of Eth.$ 450 million, out of which manufacturing industry will receive Eth.$ 318 million, mining Eth.$ 74 million, and electric power Eth.$ 58 million. The manufacturing industry development program has been phased in such a way that out of the total investment, Eth.$ 294 million should be utilized during the Second Plan, while Eth.$ 24 million is intended for projects to be completed in the course of the Third Plan. Investment for mining is partly intended for surveys and prospecting (an amount of Eth.$ 35 million), because research into mineral wealth is the most important task, not only from the point of view of long-term development of mining, but also as regards the production targets of the Second Plan. For the exploitation of minerals a sum of Eth.$ 39 million should be invested, to open new mines or to extend the existing mines. As to the investment estimated for electric power, it will be used both for the new power plants to be completed during the Second Plan period, and for these to be elaborated in the course of the Third Plan, as well as for studies and surveys.

17. Owing to its complexity and to the need for fast development transport received very high priority, with a total investment estimated

at Eth.$285 million. Together with the investment for communications of Eth.$32 million, total investment for the two industries comes to Eth.$317 million. The highest investment amount is expected to be spent for highways (Eth.$121 million) and feeder roads (Eth.$20 million) as well as for air-transport (Eth.$89 million). Whereas the highway investment program consists both of completing constructions already begun, as well as new undertakings, and the air-transport investment has been largely carried over from the past period, the feeder road project is a new one, to be implemented by the combined efforts of the Government and local initiative. The investment for the new Shipping Company is also a new item, while other branches of transport and communication should continue to extend their capacities along the lines which had been initiated during the First Five Year Plan period.

18. A total of Eth.$250 million had been estimated for investment in housing. The program anticipates that about Eth.$120 million will be investment in kind, out of which Eth.$110 million is for rural housing and Eth.$10 million for urban housing. Here again the utilization of the labour is being emphasized as the most suitable method for improving housing conditions, particularly in rural areas. As far as monetary investment is concerned, amounting to Eth.$130 million, it should come primarily from personal savings (Eth.$120 million), leaving only a small sum of Eth.$10 million to be provided by Bank loans, to assist the low-cost housing projects.

19. Other industrial and social services investment is estimated according to the targets which have been set. Obviously the growth of the sectors concerned does not depend on new investment only, but on the availability and efficiency of the personnel as well. The investment program for the Second Five Year Plan, as well as the recurrent expenditure program, had therefore to be properly balanced, with the aim of achieving maximum results at minimum costs.

20. Economy in Investment.- The investment program for the Second Five Year Plan by its structure tends to maximize the growth of the economy and social services. Although the returns depend both on capital and current costs, the expenditure on construction, equipment, and others which form the investment should be optimal, since they have a decisive influence on the profitability of new projects. On the other hand, financial resources will remain a scarce factor, due to great need for capital and to limited domestic saving. Both the principle of profitability, and the scarcity of the financial resources, emphasize the economy in investment expenditure which should be one of the guiding principles for the implementation of the Second Five Year Plan targets.

21. Economy in expenditure has to be sought in all the stages of the implementation of the investment program. Attention should be given particularly to the following:

(i) in the preparatory stage of each project all economic factors must be properly studied, such as the availability of raw material, labour force, capital requirement, costs of production, profitability, marketing, etc.; studies and designs have to save on capital expenditure, while in allocating the project, the already existing infrastructure and transport costs should be borne in mind;

(ii) studies and designs must avoid any kind of unnecessary or luxury expenditure ; the structure of investment should give priority to the equipment, which is actually the most productive capital asset, and to the reduction of costs of building to a reasonable level;

(iii) building and construction expenditure must be kept under control by all means, with the view to spending only the amount which is really necessary;

(iv) the time required for building and installing the equipment must be minimized; the time table of various work must be synchronized with the aim of shortening the construction period;

(v) during the construction period a proper organization and management must be established, and technical personnel, as well as the operators and supervisors, must be trained, in order to get both the organization and the labour ready by the time the project is completed;

(vi) the production testing period must be as short as possible, in order to start the production at an earliest date.

It is recommended to all investors, private, public and co-operative that they follow strictly the principles of economy in expenditure. This is one of the most important factors in reducing costs of development and increasing the profitability for the benefit of both the investors and of national progress.

22. To promote economy in expenditure the Government will study thoroughly all the projects submitted for licensing, or other kinds of administration. At this stage the Government Agency concerned will particularly examine the location, the capital and the labour intensity of the projects. It will endeavor to locate the complementary industries in the same region, with the view to increasing the efficiency of each particular project, and avoiding unnecessary transportation of raw materials and

semifinished goods. Regional development studies in respect of raw material, labour force, transport and communication, infrastructure and marketing will have to be undertaken by the Government Agency concerned, in order to assess the best macro-economic location for various projects to be suggested to the investors.

23. Balance of payments.- The balance of payments deficit is expected to increase from Eth.$33.5 million in 1953 to Eth.$86 million in 1959. This is primarily due to the growing import of capital goods and goods in process, which are necessary for the economic expansion. Imports are estimated to increase from Eth.$229 million in 1953, to Eth.$419 million in 1959, while exports should rise from Eth.$184 to Eth.$328 million in the same years. The trade balance deficit is expected to diminish by Eth.$6 million on account of surplus invisible trade, so that the balance of payment on current account will be in deficit by Eth.$86 million approximately.

24. The current transaction deficit appears to be heavy burden on the national economy. However, due to its physicel aspect, consisting mainly of equipment, it should largely contribute to the country's development. The greatest part of the deficit should be covered by foreign loans (Eth.$81 million), and the remaining Eth.$5 million by monetary gold and foreign exchange earnings.

25. Financial Reserve.- A five-year period is long enough to bring about unexpected situations which might result in financial unbalance. With a view to reducing the risk to a reasonable level, the financial scheme for the Second Five Year Plan has quite a strong reserve for investment, recurrent expenditure, and balance of payments. The investment fund reserve is estimated at Eth.$40 million, which might be provided from the funds of the business sector and private savers. In addition, the estimated Eth.$20 million to be accumulated in the Public Servants' Pension Fund can be used for investment purposes, if necessary. The forecasts of State revenue and expenditure provide for a Budgetary Reserve, to reach Eth.$10 million in 1959. Finally the surplus of the national currency backing over the four months foreign trade requirements, in terms of foreign exchange and gold, is estimated to average Eth.$40 to 50 million.

26. The total financial reserve, estimated to be at least Eth.$110 million in 1959, should be considered as the strategic reserve for the implementation of the Plan. Only in the case of an emergency which might hinder the implementation of the Plan should the financial reserve be

utilized. In such case the Government will endeavor to supply the reserve funds with other fresh financial means emanating from various sources. The financial reserve will be, in fact, used as the backing for extending the credit funds, both short-term and long-term.

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## Chapter 6

## AGRICULTURE

1. The objectives of Agricultural Development for the Second Five Year Plan must be stated in terms of the important role agriculture will play in the national economy, recognizing the existing natural conditions which affect agricultural development and the impact of such development on the political and social life of the country.

2. Agriculture is the largest sector of the economy: its share in the national income amounts to more than 70 per cent, while about 90 per cent of the population are employed in, and derive their living from agriculture. Almost the total export consists of agricultural products or products derived from them. The activity and income generated in many branches of the economy depend on the results achieved in the agricultural sector of the economy. Thus, agriculture supplies the basic raw materials for the manufacturing industry while the volume of internal trade, export and transport is for the most part determined by the turnover of agricultural goods.

3. The economic conditions, the cultural level, and the national and political consciousness of the vast population living on agriculture have an important bearing on their social and political attitudes. Since such attitudes of the majority of people are of concern to the nation, agricultural planning and rural progress assume greater significance in the Second Five Year Plan.

4. The natural conditions for agricultural production in Ethiopia are very favorable. Climatic conditions allow a large variety of products, tropical, sub-tropical and those belonging to the temperate zone, to be grown, providing a basis for self-sufficiency in regard both quantitatively and qualitatively to growing needs for food and for raw materials for diverse branches of manufacturing industry. The possibilities of increasing agricultural production are vast. Considering the low yields which result from extremely inefficient farming methods and tools, it is also possible to raise the yields by area units considerably in a dry farming system. There are large areas of land that can be irrigated to allow high, stable yields and at least two harvests yearly. There are still large waste cultivable lands, particularly in the sparsely populated regions, which could be cultivated.

5. All this points to the important role agriculture will have to play in the social and economic development of the country. Speeding up industrialization and setting in motion an accelerated growth of the whole economy will depend, especially in the early stages of industrialisation, on the full utilisation of the production potentialities of agriculture. Therefore, in the present as well as in the future plan periods, the agricultural development programs have to be worked out in such a manner that

the organization set up to implement the programs might be capable of achieving the production targets.

## Production Targets

6. Taking into account the role and position of agriculture in the growing economy, the following will be the permanent tasks in the field of agricultural production:

(1) to provide food in sufficient quantity and variety to meet the demand resulting from both the continuous, significant population growth and the increasing standard of living that will accompany the accelerated economic development and bring about higher and more qualitative per capita food consumption;

(2) to supply in sufficient quantities and adequate quality, those raw materials which can be successfully produced in the country, and thus provide the basis for a rapid expansion of respective industrial branches;

(3) to contribute an important share in the stablization of the balance of payments by securing greater quantities of various agricultural products of improved quality for export, as well as by providing for domestic needs by eliminating imports, or by restricting them to an essential minimum.

7. On the basis of the estimated population growth and the rise in per capita consumption in various foodstuffs which the planned increase of the aggregate personal consumption will bring about, it is forecast that the total food consumption in 1959 will be about 11 per cent higher than in 1954. In order to meet that demand and at the same time to provide for the decrease of imported food, as well as for the planned increase of export of agricultural products, it is necessary to expand the production of the main agricultural food products, so that in 1959 in relation to 1954 the following increases may be realized:

## Production of the Main Agricultural Food Products in 1959 in Comparison with 1954

(in thousand tons)

| | 1954 | 1959 | Total increase | Index Number 1959 (1954=100) |
|---|---|---|---|---|
| Cereals | 4,872 | 5,402 | 530 | 111 |
| Oil Seeds | 351 | 424 | 73 | 120 |
| Pulses | 527 | 578 | 51 | 110 |
| Sugar Cane | 650 | 900 | 250 | 138 |
| Vegetables | 489 | 565 | 76 | 115 |
| Fruits | 55 | 72 | 17 | 130 |
| Meat | 342 | 405 | 63 | 118 |
| Milk | 761 | 845 | 84 | 111 |
| Eggs (mil. pcs.) | 1,351 | 1.526 | 175 | 113 |

8. The consumption of raw materials of agricultural origin by the existing industries and by those which will be established according to the Plan, as well as by handicrafts and cottage industry in 1959, is estimated to be the following:

| | |
|---|---|
| Cotton . . . . . . . . . . . | 24,000tons |
| coarse fibres . . . . . . . | 9,000 " |
| oil seeds . . . . . . . . . | 40,000 " |
| sugar cane . . . . . . . . | .600,000 " |
| vegetables & fruits . . . | 2,000 " |
| tobacco . . . . . . . . . . | 1,000 " |
| cattle (only for slaughterhouses) | 600 thousand head |

9. The total export of agricultural products, excluding industrially manufactured agricultural products, is estimated to reach about Eth.$ 237 million in 1959, compared with Eth.$ 176 million, as the exported value of these products realized in 1953. In the course of the Second Five Year Plan period, the export of industrially manufactured agricultural products of frozen meat and other products of the meat processing industry in particular, will have to expand considerably. Bearing in mind the trends of coffee consumption in the world, as well as a very

keen competition on the world markets, it will be necessary to make great efforts to increase the coffee export from 56,000 tons exported in 1953 to a level of about 75,000 tons in 1959, an increase of 34 per cent. This can be achieved mainly by expanding markets and secondly by acquiring new markets. The export of hides and skins is expected to rise in value. This rise in the quantity and quality of hides and skins in general will come as a result of increased slaughtering, as well as through the better organisation of buying hides and skins from peasants. However, due to the planned increase in the manufacture of hides and skins by domestic industry, export is not expected to rise primarily in quantity, though its value should increase considerably on account of a better quality, and, consequently, higher prices. It is expected that the industrial production of vegetable oil will increase, allowing at the same time an expansion of the present level of oil seed exportation. It will also be necessary to increase the value of the export of pulses.

10. Evaluating the natural, as well as the other conditions, and taking into consideration what has been said in previous paragraphs, the following are the production targets to be realized in 1959 as the final year of this plan period:

a) Increase the production of cereals in relation to the production realized in 1954 by at least 530,000 tons and thus satisfy the domestic needs which will arise during that period. The increase in production should be realized for the most part on peasants' holdings by carrying out necessary improvements in the methods of production and by raising productivity of labor;

b) increase the production of cotton to about 14,000 tons and make preparations to obtain, in the next 3 to 5 years after this planned period, additional quantities in order to meet all demands in that period. Beside expanding the production of cotton on the peasant farms (to about 4,000 tons) the major part of the production target for 1959 (10,000 tons) will have to be realized on the modern organized large-scale farms which are yet to be established;

c) increase the production of coarse fibres (sisal, kenaf, false banana) to about 9,000 tons and thus satisfy the estimated domestic needs and create conditions to increase the production of coarse fibres, particularly sisal, on the peasant holdings in cooperation with the large-scale farms. To achieve this objective large areas will have to be put under sisal and other fibre crops.

d) increase the production of oil seeds by 73,000 tons in order to improve nutrition, provide raw material for domestic industry and increase export. This increase of production has to be realized both on big farms and peasant holdings by introducing more efficient methods and tools in the production process.

e) increase the production of pulses by 51,000 tons to provide for the needs of domestic consumption and to increase export, and for the new canning industry which will develop in the course of the plan period. The estimated increase of production will be attained on the peasant farms and the needs of industry will be provided, for the most part, by the big farms, which will produce better quality of products required for the processing;

f) raise the production of other vegetables and fruit for the canning industry that will be set up. It is estimated that it will be necessary for this purpose to produce some 2,000 tons of good quality products, and this will have to be achieved largely on the big farms. Increase considerably the production of paprika to be ground for export as well as vegetables for domestic consumption - mostly on peasant farms;

g) efforts are to be made to improve the quality of coffee in the first place and if possible increase the quantity;

h) it will be necessary to organize fattening of about 350,000 heads of cattle and about 400,000 small livestock to provide the planned meat packing and canning industry with qualitative raw material and thus strengthen its competitiveness on export markets. This task will have to be carried out by the large scale specialized farms which will be established during the Second Plan.

## Priorities and Financial Requirements

11. There are several basic problems which will have to be solved in order to utilize the favorable natural conditions and to carry out the tasks set forth. The most important are: (1) organization of agricultural research and experimentation; (2) organization of various agricultural services; (3) allocation of available material and human resources to different agricultural sectors and production areas; (4) training, and (5) the organization of the implementation of the program.

The manner in which these problems will be solved is of paramount importance to the speed with which agriculture will be able to develop in the next and subsequent periods. In that sense the formulation of the agricultural program for the next five years does not consist of setting the production targets and sources for their implementation; it stretches over these bounderies and by necessity opens wider horizons to the production achievements, by laying down the foundations for a more rapid development of the agricultural sector of the national economy.

12. The pattern of investment and of financing agricultural development in the Second Five Year Plan depends on the basic approaches in the solution of the aforementioned problems. It will also be influenced by the manner in which the balance of needs as against the available resources becomes apparent at this stage of the agricultural development.

a) Organization of agricultural research and experimentatio is given full attention, bearing in mind that it is a basic prerequisite for working out that pattern of agricultural production which will make the best use of all favorable natural conditions prevailing in Ethiopia. Research and experimentation has to make possible, by the end of the Second Plan, and especially in the subsequent one, a mass introduction of raising the most promising products, as well as a more rapid development of up-to-date large-scale production. It is envisaged that for the purpose of research and experimentation in various fields of agricultural production, including necessary surveys which are indispensable for the assessment of the production potentialities of Ethiopian agriculture, an amount of about Eth.$ 48 million is estimated to be spent both for the recurrent and capital expenditure during the next five years;

b) various agricultural services such as extension work, veterinary and plant protection services, animal and seed breeding stations will not only have to form a basis for a future faster expansion of the network of these services but also to contribute directly to the achievement of the production targets set forth for this plan period. Out of a total of Eth.$ 29 million earmarked for these services, Eth.$ 6 million or 2.5 per cent of the total monetary investment in agriculture is envisaged to be used for investment purposes, and Eth.$ 23 million for recurrent expenditure;

c) big co-operative and other up-to-date large-scale farms will have to play a vital role in the advancement of Ethiopian agricultur The expansion of these farms, based on the experience already gained (Awassa, Botter, Tendaho, Arba Minch, etc.) will have to serve as centers for the demonstration and dissemination of modern and efficient methods of farming and to become an increasingly important supplier of quality products required for the growing domestic manufacturing industry and for export. This has called for an investment policy which will concentrate the bulk of the available financial means in the expansion of the big, modern farming sector. It is envisaged, therefore, that out of Eth.$ 242, million, which sum represents the total monetary investment in agricultur during the Second Five Year Plan, about Eth.$ 128 million or more than half will be invested in up-to-date large-scale co-operative and other farms;

d) the peasant holdings will be assisted by a network of institutions dealing with extension work and protective services, and by the co-operative movement in particular. Besides the financial means which in the form of services extended by various institutions for agricultural promotion, will benefit the peasant agriculture, the Government's financial assistance aims at spreading co-operatives in the villages. The sum of Eth.$ 22,6 million, or nearly 10 per cent of the Government's total monetary investment in agriculture, is earmarked for investing in the multipurpose agricultural co-operatives;

e) training personnel in a sufficient number to meet the various urgent needs and to enable the execution of the program of agricultural development, has not only been a separate field which presuppose the absorption of a necessary amount of the Government's financial resources, but has also acted as a check on the steady implementation of the program taken as a whole. This is because the number of qualified personnel is one of the most serious limiting factors conditioning the pace by which modern farming can spread. On the other hand the training of such personnel, besides being a time-consuming process, depends not only on the magnitude of the financial means available for that purpose, but also on the solution of many other organizational problems. The amount to be spent for training, both in the form of recurrent and capital expenditure, in the course of the next five years is estimated to be about Eth.$ 5,6 million, which does not include the amount to be used for training agricultural technicians within the community development program.

13. Taking into account the estimated investment in kind on the peasant holdings, the total amount to be invested in the agricultural sector of the national economy during the years 1954-1959 will be Eth.$ 355 million, out of which Eth.$ 113 million represents investment in kind, Eth.$ 5 million in money to be undertaken by the peasants directly, and Eth.$ 237 million as the Government's financial share. With the Eth.$ 29,5 million to be used for recurrent expenditure, the total financial means that the Government will direct into the agricultural sector during the next five year plan period, will amount to Eth.$ 266,5 million. The distribution of this amount is given in the following table:

## The Distribution of the Total Investment in Agriculture for the Whole Five Year Period 1955 - 1959

| | million Eth. $ |
|---|---|
| **Total** | 355 |
| (of which) | |
| Investments in Kind | 113 |
| Money Investments | 242 |
| **Distribution of Money Investment** | |
| Building of Large-scale Farms | 127,7 |
| Peasant Holdings (self financing) | 5,2 |
| Co-operatives | 22,6 |
| Extension Services | 0,8 |
| Veterinary Services | 2,4 |
| Plant Protection Services | 1,4 |
| Animal-breeding Stations | 1,1 |
| Seed-breeding Stations | 0,3 |
| Training of Personnel | 2,1 |
| Research | 1,9 |
| Surveys | 38,7 |
| Others | 37,8 |

The budget for recurrent expenditure is estimated at a total of Eth.$ 29,5 million, distributed as follows:

## The Distribution of Recurrent Expenditure in the Agricultural Sector

| | million Eth. $ |
|---|---|
| **Total** | 29,5 |
| Research | 6,8 |
| Extension Services | 6,5 |
| Veterinary Services | 9,4 |
| Plant Protection Services | 5,1 |
| Animal Breeding Services | 1,4 |
| Seed-breeding Stations | 0,3 |

14. These proposed investments and recurrent expenditure should make possible an increase of 12 per cent in the total agricultural output of 1959 compared with that of 1954, showing an annual rate of growth of 2.3 per cent.

## The Promotion of Peasant Agriculture

15. Due to the fact that agriculture is almost exclusively based upon peasant farming it is evident that full attention should be devoted to the improvement of the peasant holdings. Without improving the living conditions of such a large part of the population, it will not be possible to achieve the basic target of economic and social development, viz., a continuous improvement of the standard of living of the people. The socio-political implications of the program of improving the standard of living of the rural masses, already referred to, only add to the significance of the tasks that require continuous and concerted efforts. For this reason the Second Five Year Plan sets forth extensive tasks, and envisages measures for agricultural improvements as well as for the advancement of the countryside. The shortcomings of the existing peasant farming point clearly to the main lines along which the development of the peasant agricultural sector has to proceed.

16. The basic characteristics of the peasant agriculture are out-of-date traditional land relations and the land tenure system, inefficient methods of production because of primitive implements and tools and a lack of elementary know-how. The consequences are extremely low productivity in terms of output in relation to both manpower and area, low per capita income and consumption, subsistence economy as a dominant mode of living, very small or no savings, and consequently very limited possibilities to expand production. These characteristics are also the basic problems which have to be solved in order to realize the necessary improvements in peasant agriculture and of the countryside. These problems are interrelated and it is not possible to solve them singly. Therefore it is necessary to approach peasant agricultural improvement in its totality and carry out all the indispensable measures in a well synchronised way and according to the Plan. The future agricultural policy must constantly bear in mind the importance of following up and studying the trends in agriculture, as well as of evaluating the measures undertaken, to discover and undertake new measures which will aid and accelerate development.

17. The execution of Land Reform with the final aim of realising the proclaimed principle that "the fruits of the farmer's labor must be enjoyed by him whose toil has produced the crop", should be considered as a composite part of the measures for the development of peasant agriculture. The execution of the first phase of Land Reform during the Second Plan is, in fact, a sine qua non for the successful application of other measures.

18. In cultivating the crops many operations which are indispensable for the achievement of satisfactory yields are not performed, because there are no tools with which to carry them out. For example, nearly

all the crops are sowed by hand sowing. There are practically no tools or implements to cultivate the crops between rows and therefore, as a rule, it is not done. The preparation of seedbeds is very poor. The threshing of grain is an operation which not only takes much time but also leads to big losses of grain and considerably reduces the useful yield. Livestock fodder is not stored for the dry season, so the livestock have low productivity due to poor and irregular feeding. Much time is wasted in the inefficiently organized household activities such as providing water and fuel, grinding grain, preparing meals, etc., with the result that considerable manpower is excluded from agricultural production. Because of a low labor productivity, in spite of ample labor force in agriculture, there is still a shortage of manpower to cultivate more land and to carry out on time, and in the proper way, all those operations in crop management practice which might lead to a more significant increase of the total per capita and per hectare production. All this means that for the economic and social development of the countryside it is necessary to start increasing the productivity of labor in production, as well as in the household activities. This has to be done by applying measures such as better agricultural methods and techniques, a timely carrying out of certain operations, better seeds, manuring, etc.

19. The tools, implements, and machines which will primarily have to be introduced are moldboard iron plows, harrows, rollers, scythes, simple drills, harvesting and threshing machines, winnowers, selectors, carts, etc. At the same time it will be necessary to erect mills with service paid in kind, pounding mills, to introduce water pumps, dig wells, build cisterns for water in places where wells cannot be dug, build better storage space for agricultural products, introduce simple devices and appliances that will facilitate household work. Parallel with this it is necessary to introduce new crops, better seeds, new working methods, and field manuring, to prepare livestock fodder, select better and more productive cattle for breeding, protect the livestock and crops from diseases and pests, improve the processing and conservation of hides and skins and the home processing of agricultural products, spread cottage industry, etc. All this will make possible an increase of labor productivity and the improvement of the general living conditions of the village population. The National Community Development Scheme is expected to be the most appropriate organization through which the accomplishment of these complex tasks will be sought.

20. New tools and implements, as well as other agro-technical means and measures make possible an increase of labor productivity and production, but they call for many changes in working methods. It is, therefore, essential to teach the producers to utilize new tools properly and to apply new techniques in agricultural production. Since it is necessary simultaneously to introduce more innovations, special attention should be devoted to the elementary training of the producers. In order to use the proposed technical means efficiently it is very important to attend to their maintenance, make the necessary repairs, lubrication, etc. Skilled workmen are necessary to operate the threshing machines. While

training the producers to use the new technical means properly and to apply new agro-techniques, it will be important at the same time to qualify the village craftsmen to maintain the new tools and implements. This means that the Agricultural Extension Service will be given an important role and will have to be organized to suit Ethiopian conditions best. The basic principle to be followed is that the advice regarding improvements must be accompanied by the means to apply the advice given. It will therefore be necessary to combine the activity of these services with the development of farmers' co-operatives. These efforts will lead to an increased production and better quality of products, meeting the growing needs of the rural population and the demands of the market. The production and per capita income will grow, and in addition to raising the standard of living of the producers, it will be possible to set aside more means for expanding and further promoting production. Subsistence economy will be discouraged, money economy will develop in agriculture and this will have new positive influence on the increase of agricultural production and changes in the countryside. It will also create a market for the growing domestic industry. Interest in increased and improved production will develop among the producers and they will be more inclined to adopt new methods and know-how. The cultural level of the producers will rise, their national and political consciousness will be strengthened resulting in their desire to contribute more to the economic and social development of the country. In this way they will improve their material and other conditions of life. Thus the vicious circle which has been fettering agriculture for centuries will be broken, and it will become an important factor in accelerating the economic and social development of the country.

21. In order to introduce the proposed tools, implements and machines it will be necessary:

a) To have them available for purchase at favorable prices in relation to the prices of the agricultural products. Some of these are already available in Ethiopia, others will have to be imported. Therefore, it is necessary to start immediate construction of a factory and produce the tools and implements at home. To enable domestic production to supply the tools, implements and machinery at relatively low prices, in the beginning the Government will have to support it with suitable policies (tax exemption, etc.);

b) to enable the producers to obtain the tools, implements and machines. When the producers realize the benefits occurring through the introduction of the new tools and implements some of them will find the money to buy them, especially as tools will not be expensive, but a larger expansion of these tools and implements could be induced only through the Development Bank's credit extended to the Grain Corporation or Farmers' Co-operatives. These organizations will then be able to buy tools and implements and supply them to the advanced farmers on moderate credit terms. Repayment of the credits should mainly be done in kind, i.e. with farmers' surplus. Selectors, threshing machines, winnowers and other agricultural machinery should be provided by the farmers' co-operatives and leased to the farmers at reasonable rates. These more expensive implements will also have to be sold on credit supplied by the Development Bank through the co-operatives or Grain Corporations with the instalments paid out of the sale of the produced surplus. These practices will have a twofold favorable effect - the more rapid application of efficient agricultural implements leading to larger production, and an increase in the marketable agricultural output leading to the commercialization of peasant agriculture;

c) to instruct the producers to use the tools, implements and machines properly, i.e. to get them to know and employ the new agrotechnical methods made possible by using new techniques. This has to be done through well organized and efficient Agricultural Extension Service, making available a sufficient number of skilled personnel and the other necessary means.

## Farmers' Co-operatives

22. The development of a monetary economy in agriculture will bring about a series of new problems which will have to be solved. Among them are the marketing of agricultural products, supplying agriculture with means for the production and processing of agricultural products, making possible the use of large machines which peasants individually cannot utilize to a full capacity, providing the producers with necessary credit to be used for increasing production, etc. All these problems will have to be solved so that monetary economy in agriculture as well as agriculture itself may further develop. This should be solved in a way that will give the farmer the largest benefits from his work and his product. Experience shows that the farmers' co-operative is practically the only suitable organization by which family farms can help themselves and solve the problems to their own benefit. Therefore, this Plan has devoted a considerable attention to the establishment of farmers' co-operatives to which necessary assistance will be rendered.

23. The tasks of the farmers' co-operatives will have to be widely varied, so that the farmers will be able to solve all the problems in connection with agricultural production which a single individual would not be capable of solving by himself.

a) The co-operatives should handle the purchase of the farmers' products and market them. There is a large difference between the prices which the farmer gets and those which the consumer pays. The farmer sells small quantities of mixed and unequal goods and that explains why he obtains low prices. The poorly organized commerce does nothing to improve the quality of the products. The co-operatives will purchase the products directly from the farmer, sell them wholesale to avoid the numerous middle-men and pay for the goods according to quality. They will also take care that the purchased products are cleaned, classed, properly handled and preserved in order to attain better prices. By distributing better seeds the co-operatives will spread the production of better quality varieties and in this manner influence the improvement of quality. The improvement of the quality of coffee, hides and skins, oil seeds and pulses will be accomplished best if the co-operatives organize the purchase from farmers.

b) The co-operatives should become centers for the development of their community. They will have to supply the farmers with tools and implements, spread the use of better seeds and fertilizers, organize and carry out with their own machines plant protection when individual action proves inefficient or too expensive. The co-operative should buy all these machines and organize their common use by charging fees for the service rendered. It can organize a joint utilization of better breeders, the selections of livestock, fattening livestock in order to improve quality, etc. By extending the scope of production, common use of machines, etc. the co-operatives will spread new production methods which are the most urgent requirement for opening up the process of advancement of the countryside.

c) Much better prices and improvement in quality can be achieved when the co-operatives organize the processing of the purchased products. In this manner many existing problems of the country-side may be solved, so opening the road to a more rapid development of the village. The co-operatives should organize salting and better drying of the hides and skins; they should pay according to quality and build storehouses for better preservation and manipulation of the hides and skins; they should have coffee cleaning plants, flour mills, oil presses, etc., in order to extend services to the farmers. The co-operatives should organize workshops for cottage industry, etc. They could have nurseries to promote fruit growing, vine culture and afforestation of the countryside. Co-operatives should also establish handicraft workshops, if there are none, for repairing and maintaining the tools and implements, as well as extending various other services to the farmers; by these methods the co-operatives can help the villagers to earn additional income.

d) Larger financial means than the farmers can afford are necessary to introduce the use of new implements and tools, to utilize larger machines, to spread the use of better seeds, fertilizers and chemicals for plant protection, to use better breeders, establish orchards and vineyards, etc. It will not be possible successfully to accomplish such a vast program without an adequate organization of agricultural credit on a co-operative basis. The Co-operative is able to obtain larger credit from the Bank and thus reduce costs, and it can more justly distribute credits among its members. The credit should not be extended to farmers in cash, but in goods and services, i.e. only for productional purposes. Thus the credits will be used for what they were intended for - to make possible the increase of production, out of which the repayment can be made, leaving the farmer at the same time with more produce at his own disposal. The co-operative could organize saving and the collection of surplus funds from the farmers, and in this way contribute to the mobilization of these means which would otherwise be left inactive.

24. These possibilities do not exhaust all the advantages of the co-operatives, yet they clearly demonstrate how immense the importance of co-operative movement is for the development of agriculture and the country-side. It is, therefore, necessary to start immediately planned training of the necessary personnel and to carry out all other preparations

needed for the establishment of farmers' co-operatives. It will not be possible during the next five years to establish a great number of co-operatives, primarily on account of a lack of personnel and experience. The main objectives in this field for the coming five-year period will be to establish, strengthen, and make self-reliant at least 20 co-operatives as well as to carry out all the preparatory work - on the basis of experience gained - so that in the subsequent plan period as large an expansion as possible of the farmers' co-operatives could be carried out. It will be necessary to establish co-operatives, primarily in places where commodity production is already developed, such as the coffee-growing regions, the areas surrounding Addis Ababa.

25. It has to be kept in mind that co-operatives are economic organizations and that they will succeed only if they operate on economic principles, which means that they should be established only where conditions are ripe for their operation. Co-operatives must not be compulsory organizations, and the farmers should have an economic interest and desire to do business with co-operatives. Therefore, they must be strong and capable economic organizations. Co-operatives should be based on the following principles: a) voluntary membership, b) democratic management and c) economic interest of the farmers to join co-operatives. It is necessary to establish multi-purpose co-operatives which may start first with marketing farmers' products and later on supply the farmers with their agricultural requirements. This approach appears the most suitable at the beginning, both because of shortage of trained personnel and because experience in other countries has shown that commodity production in agriculture is not the dominating factor everywhere. The co-operatives in collaboration with the Extension Service should become the fundamental factor in the development of peasant agriculture and the socio-economic progress of the village. Government has to assume full responsibility for establishing and operating co-operatives by providing technical, organizational and material aid.

26. With the aim of carrying out the tasks set for the development of peasant agriculture, the Extension Service of the Ministry of Agriculture will have to accomplish, in the Second Five Year Plan, the following targets:

(1) Introduce for permanent use on the peasant farms at least the following number of:

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|---|---|
| Moldboard iron plows . . . . . | 15,000 |
| Harrows . . . . . . . . . . . | 15,000 |
| Rollers . . . . . . . . . . . | 1,000 |
| Hoes, scythes, etc. . . . . . | 100,000 |
| Carts . . . . . . . . . . . . | 2,000 |
| Drills . . . . . . . . . . . | 100 |

| | |
|---|---|
| Harvesters drawn by oxen or horses | 300 |
| Threshing machines . . . . . . . . | 300 |
| Winnowers . . . . . . . . . . . . . | 500 |
| Grain selectors . . . . . . . . . . | 500 |

(2) Spread the use of better seeds among the farmers on their holdings as follows:

| | |
|---|---|
| Wheat, on hectares . . . . . . . . | 50,000 |
| Barley, " " . . . . . . . . | 20,000 |
| Maize, " " . . . . . . . . | 20,000 |
| Pulses, " " . . . . . . . . | 10,000 |
| Oil seeds, on hectares . . . . . | 10,000 |

(3) Extend the cultivation of better or new crops on peasant farms:

| | |
|---|---|
| Cotton, on hectares . . . . . . . | 20,000 |
| Sisal, " " . . . . . . . . | 1,000 |
| Vegetables, on hectares . . . . | 100 |
| Coffee, on hectares . . . . . . | 500 |

(4) Carry out afforestation in the countryside by planting fast-growing trees on 30,000 hectares. Introduce hay storage and other cattle feed for the dry period on 10,000 farms. Organize the utilisation of selected male breeders for cattle, horses and sheep in at least one hundred villages.

27. These and other measures are expected to bring about a rise of 11,0 per cent in agricultural output on the peasant farms in 1959 as compared with 1954, creating at the same time conditions for the realisation of an even larger rate of growth in the subsequent plan period.

Commercial Farms

28. Although significant development of the peasant sector has been foreseen, it will not be possible to realise the production targets in peasant agriculture exclusively. Important production targets will have to be realized on the big modern commercial farms. This sector will have to produce large quantities of raw material for the domestic industry such as cotton and other fibres, vegetables, fat cattle for the meat packing and canning industry, etc., as well as to increase production and improve the quality of products intended for export. The commercial farms

will have to produce better quality seeds and breeding cattle for the development of peasant agriculture. They will have to ensure the rational use of investment funds for the cultivation of wasteland in developing new regions, such as the Awash Valley, Wabi Shebelli Valley, etc.

29. There may be several types of such farms according to ownership: co-operative farms, farms owned by Ethiopian citizens or companies, farms organized by foreign concerns on the basis of concessions granted, mixed companies, public farms and others. The development of various types of farms will be encouraged, organized or supported by the Government.

30. The Government will help and stimulate, by all convenient economic and other measures, the establishment and development of big private commercial farms. The existing land tenure system should not be allowed to interfere with the organization of large modern farms. Those who are interested will be granted Government land on a long-term lease at a low rent with the provision that they are obliged to start production at the latest within three years after obtaining the land and to cultivate all the granted land at the latest within five years in the manner agreed upon. Land obtained in this manner must not be subleased. The person who organizes a commercial farm on his own land should be exempted from taxes for five years. Special privileges may be granted to those who plant at least 40 per cent of the land with cotton each year or who produce other fibres, particularly if they have to make larger investments per hectare in order to reclaim the land for production. Measures have to be taken so that the banks grant supervised credits at favorable terms for the promotion of commercial farms.

31. Special attention will be devoted to the establishment of public and co-operative large-scale farms. The largest part of the production targets assigned to the large commercial farms, particularly in this beginning phase, should be carried out by the public and co-operative farms. The very existence of these farms will be of extreme importance both for the introduction of more advanced farming methods on the peasant holdings in the surrounding areas, and for inducing the entrepreneurs to invest their capital in the large scale farm projects.

32. The following basic principles should guide the organization and operation of the public and co-operative farms.

(1) The farms will have to be built up as business organizations which will fully respect the rules of rational and economically sou business management. The workers should be paid according to the performance of their work. The organization of work and the methods of remuneration should be such as to develop an interest in the employees to increase labor productivity, utilize more efficiently the technical means, protect the property of the farm, etc.

(2) A possible degree of up-to-date mechanization has to be introduced on the farms; especially operations which ensure qualitative and timely agro-techniques should be mechanized. Yet, owing to the shortage of available capital on one hand, and ample resources of labor on the other, the labor-intensive methods of production should be given priority whenever they prove economically justified.

(3) Special attention has to be devoted to the working out of procedures which will most facilitate the procurement of land for farm establishments. It appears that in the practice of the Government, taking up land on a long-term concession offers the best possibility for a speedy development of large-scale co-operative and public farms. These policies should be favored, particularly as payments for the concessions are very small at present, and at the same time this legal status of the occupancy of land would be very suitable to the business character of the farms.

(4) In view of the need to provide for new settlements as well as for resettlements of the population on agricultural land, the program has to be so worked out that it will meet the demand for labor which will increase in proportion to the establishment and expansion of large scale co-operative farms. The experience already gained has shown that there exists a high degree of mobility of labor that is always ready to move to places wherever the opportunities for a gainful employment are opened to them.

## Tasks Concerning Separate Production Targets and Measures for Their Implementation

### Crop Production

33. Cereals are the most widely spread crops in Ethiopia. They cover over 80 per cent of the sown area and are the main foodstuff. An increase in cereal consumption, as well as structural changes, may be expected in respect of the varieties of cereals which are used for food. Accordingly, the consumption of wheat would increase at the expense of barley, sorghum, maize and even teff and such a change should be encouraged because of its benefits to people's health and the national economy. It is necessary particularly to suppress teff as a low yielding and labor-consuming crop under the existing agro-technical conditions. In order to increase the domestic production of cereals, at least to meet domestic needs, it is necessary to improve agro-techniques and to introduce better varieties and improved seeds. An immediate research has to be undertaken, covering a wide range of conditions, to determine, in the next three to four years, which main varieties of cereals are suitable for growing in the different regions. In the first place this study should cover wheat, maize, barley and sorghum. Extension Service should organise the multiplication of the selected seeds by way of contracts with the commercial, co-operative or State owned farms. For this purpose the Extension Service should possess machines for cleaning and sprinkling with chemicals, as

well as space for storing the seeds in the most important regions of production. Seed production should be controlled by the research institutions which produce the original seeds. Since experimentation and seed selection takes time, the research institutions in co-operation with the Extension Service will have to start immediately selecting the existing best crops on the fields in the more important regions of production. Thus, by multiplication, it will be possible to begin an extensive replacement of the farmers' inferior seeds by better seeds. At first the quality seed would be exchanged for the grain which the peasant farmers produce, and later when they get to know the importance of these seeds, economic prices will be gradually introduced. Research should also determine for individual regions the corresponding methods of agro-techniques, i.e. most favorable sowing time, number and time of hoeing or weeding the crops during vegetation, the influence of stable manure and fertilizers on the crop yields, etc.

34. In addition to the above, improved market organization will considerably promote cereal production. By building a network of grain silos it will be possible to purchase all the offered market surplus and thus secure reserves and enable intervention in the market whenever necessary. The co-operatives should be able to rent silo space for grain storage. On this basis they could easily obtain bank credit to pay the farmers and thus avoid the selling of grain in times when the prices are too low.

35. Special attention in the current and next plan period must be devoted to realize as speedily as possible the production targets set for cotton and coarse fibres. Domestic production of fibres for industrial use will ease the balance of payments and provide employment for a considerable number of the population. Some fibres, especially sisal, can be exported in considerable quantities. There are two methods that can be used in order to carry out these tasks. The first method to secure the major part of the production, particularly of the necessary quality, is, by suitable measures of economic policy (favorable credits; obliging the textile industry to use subsequently more and more domestic raw materials; by import and customs policy), to encourage private capital and industrial enterprises to organize production of fibre crops directly by establishing their own up-to-date large-scale farms. The second method would be by making contracts with the small agricultural producers, whom the industry itself, or the large-scale commercial farms, would supply with better seeds or sisal bulbs, with modern tools (on credit), and with technical instruction. They could carry out disease and pest control, purchase the produced quantities at contracted prices, keep ginneries, etc. for the farmers at cost. In order to execute these tasks a separate trade organization could be established which should benefit considerably from the experience of the organization in production of tobacco.

36. Other Crops. Large farms, whose task is to produce cotton may also produce oil seeds, pulses, peppers, etc. if agro-technical and economic reasons demand it. Meanwhile, their quantities, should be increased primarily by expanding and improving production on peasant farms on the lines suggested for cereals and cotton. Here, just as there, the factories, farmers' co-operatives and big commercial farms have to play an important role. In order to increase the production of oil seeds and pulses it is particularly important to introduce better varieties, to make selection among the existing ones, and to find an adequate technology of production. The production of tobacco should be expanded through the existing organization, so that considerable quantities might be exported.

37. Vegetables. Vegetables are not adequately represented in the diet of the people and in many parts they are almost unknown. Only the production of chili (paprika) is more developed in some regions and consumed in large quantities, but it is mostly made into berbera. In order to improve the health of the people through nutritive diet it is essential to introduce and expand the production of various vegetables on peasant farms, all the more so because conditions exist for almost continual production. After brief experimenting in order to determine which varieties are suitable for the respective regions, as well as to find corresponding agro-techniques, the Community Development and Agricultural Extension Service should expand vegetable raising as well as introduce the methods of preparing and using them for food. School gardens, which exist in some parts and which should be extended, can contribute largely to the introduction and spreading of the cultivation and consumption of vegetables in rural households. Measures should be undertaken to see that there will be no military garrisons, police stations, etc. - if they are situated in regions where vegetables can be raised - that do not have a vegetable garden. To supply the canning industry and larger towns it is necessary to organize vegetable production on a larger scale on the big farms. This would also influence the spreading and growing of vegetables on the neighbouring peasant farms.

38. Fruit and Grapes are still less represented in nutrition and in many parts they are unknown. Natural conditions for fruit growing, particularly citrus trees, bananas, papayas and grapes, exist in many regions. Considering the importance which fruit and grapes have in nutrition, it is necessary to make every effort to raise them on peasant farms for home use as well as for the local market. In order to expand fruit and grape growing it is necessary to employ the same methods as have been suggested in case of vegetables, provided that the Government and local bodies set up nurseries for seedling production. With respect to climatic conditions, Ethiopia could export certain kinds of fruit on a much larger scale than in the past, because they can ripen at the time when they cannot be produced in other parts of the world. Obviously, these possibilities are limited to those areas where climatic conditions and transportation facilities are favorable. It is necessary to stimulate the development of large-scale production of fruit and grapes by all means in order to

supply the domestic market, and to avoid importing those varieties which can be produced at home.

39. Coffee is the most important export commodity of the country, and it will remain so in the coming plan period, in spite of the efforts which will be made to diversify exports as much as possible. In fact, in view of the relatively slow increase of coffee consumption in the world and the keen competition on the world market, serious efforts will have to be made to expand coffee export and win new markets. To achieve this, appropriate measures should be undertaken by the Coffee Board to improve the quality of coffee. In this way better prices will be attained and real conditions ensured for a further increase of exports. There will be a certain improvement in quality in the following years as a result of the larger participation in export of coffee raised on the plantations which were erected in recent years. However, of more significance will be the concrete measures which will be carried out in order to improve methods in production, picking, and preparing for market the so-called forest-coffee which is chiefly collected from the small producers. This will be accomplished, above all, by providing instruction on a larger scale to producers concerning the importance and methods of thinning and cultivating forest coffee (by organizing concrete action for this purpose), the most favorable time and method of picking, of the damage done by mixing picked coffee with that which has fallen on the ground, etc.

By offering a purchase price according to quality the producers can be effectively stimulated to apply the aforesaid measures. In order to secure proper methods of preparing coffee for the market, every initiative to erect stations for processing coffee by the wet method, for erecting modern equipped cleaning plants, etc., will be stimulated by granting favorable credits. It is desirable that such initiative will be taken by the co-operatives which would be organized by the producers themselves. In the production regions where such initiative is lacking it will be the duty of the Coffee Board to establish such facilities as owner built projects. In order to be able to execute these tasks the Coffee Board will enlarge its technical field service, as well as the official body which will carry out the prescribed control measures concerning the handling of coffee, and particularly its exportation. In addition, the Coffee Board should set up a Coffee Exchange aimed at the improvement of the coffee trade.

## Animal Husbandry

40. According to the number of livestock in relation to her population Ethiopia is classed among the countries with the most numerous livestock in the world. Meanwhile, the economic benefits of this wealth have so far been small, both to the owners of the livestock and to the whole national economy. The main reason for this is, above all, a very limited domestic and export market for cattle and cattle products. Since it will not be possible, for the time being, to expand the domestic market to any extent, the opening of foreign markets for Ethiopian cattle and cattle products will be one of the key economic tasks to which full attention will be devoted in the forthcoming plan period. In this manner the numerous livestock will gradually change from dead capital to essen-

tial means of production, and parallel with this process it will actually be possible gradually to introduce and apply measures which will lead to an increase in the present very low productivity of the livestock and to improvement of the cattle products. In order to attain desirable results in this respect it will be necessary in the coming five-year period to carry out all preparatory works, primarily basic research, drafts of fundamental legal regulations, etc., so that it will be possible in the subsequent period to execute the measures for livestock improvement on a wide scale.

41. The basic disadvantages to the export of cattle and cattle products have been: (a) complete absence of any slaughtering industry, and (b) widespread dangerous livestock diseases, primarily rinderpest, foot and mouth disease, and bovine pleuro-pneumonia. The various parasitic diseases are also widely prevalent, particularly piroplasmosis. Due to an undeveloped veterinary service, these diseases have done much damage to the national economy through immense direct losses caused by a high percentage of livestock mortality, as well as through a total passivity of this national wealth which it is impossible to export. The theoretical possibility of exporting live cattle - under existing circumstances - to the Near East countries could not be effected in a larger measure owing to the difficulty of transporting cattle over the desert to the sea ports. Therefore, to make export possible the Second Plan has foreseen the building of a more extended network of modern slaughtering industry, whose capacity, together with the expansion of the existing industry, would increase from about 7,000 tons to 42,000 tons of meat by 1959.

42. In the course of the next five years the Government will organize a sufficiently efficient veterinary service in all the more important regions of production, primarily in those regions which will supply the existing industry with raw material, in order to enable the slaughterhouse industry to increase without difficulty its export potential.

43. In order to create favorable conditions for transporting the cattle to the markets, the Government will continue the construction of water ponds already begun in the Borana region and gain further experience in this respect. For the same purpose, initiative may be expected from local authorities in co-operation with the people, who could, by voluntary local public work in the regions along the main trails over which cattle are transported, build a considerable number of wells and in their vicinity reserve necessary areas of public pastures where the livestock can graze during the journey. The Government should extend all technical assistance to such local initiative. Action taken on these lines, both in this plan as well as in the future, will qualify the main routes for cattle transportation to the market in order to create transport conditions which will reduce to the minimum the high losses suffered so far.

44. In order to supply the slaughterhouse industry regularly with quality cattle the Government will, by granting favorable credits, stimulate every initiative to establish new commercial farms or to make the existing ones fit for fattening the lean livestock bought from the peasants and then sold to the slaughterhouses. This fattening would be carried out by the commercial farms on specially organized productive pastures (to be utilized in rotation during the rainy season). These farms will produce and store necessary fodder for the dry period in order to fatten cattle during that season (by producing leguminous hay and grain feed on the plow fields, making hay on natural meadows, etc.).

45. Along with the expansion of markets for cattle and cattle products, interest will gradually develop among the producers to improve the quality of cattle and its productive attributes. The producers will take interest in adopting measures which will lead to this goal. Therefore it will be necessary to begin in the Second Plan such an extensive preparation that will ensure the required conditions in the coming period, on a sufficiently wide scale, to improve the quality and productive attributes of the cattle. To achieve this it is necessary

a) that the existing state livestock centers, at least two or three, start raising and selecting quality male breeders. They will then be used to improve the quality of the livestock in certain regions by establishing communal and co-operative bull and ram stations. Livestock centers will examine the possibilities of introducing better breeds of cattle and sheep, for the most part those which are already acclimatized in the neighbouring countries. They would later be multiplied in order to raise pure blooded stock or to cross them with domestic breeds. In this connection it is necessary to gain adequate experience in artificial insemination;

b) in certain regions where possibilities will permit, to begin in a limited measure to select male breeders, particularly bulls. In this case it will be necessary to select, among the bulls owned by the peasants, a sufficient number of the best specimens (according to the number of cows) and obligatorily castrate the rest. Thus, only the best heads would be used for propagation. Later, according to the quantity of production, breeders of still better quality will gradually be used.

46. Considering that there is an increased demand for wool in Ethiopia it is necessary to promote the breeding of wool-producing sheep, and thus obtain more benefits from sheep raising. To achieve this it will be necessary to continue to spread the raising of merino sheep on peasants' farms. In the Second Plan at least one large commercial farm to raise merino sheep should be established. The merino herd which already exists in Ethiopia could be used as a basis for this farm and the Ministry of Agriculture will immediately organize the necessary studies in order to determine the location for raising merino sheep so that the farm may be designed and erected in the shortest time. Parallel with this it is urgent to prepare and specialize in advance the necessary skilled personnel. The

principal task of this farm will be to spread merino sheep in all the regions where preliminary experimentation will assure the possibility of economically breeding merino sheep.

47. The main obstacle which stands in the way of introducing better breeds of livestock and of improving the quality of the existing cattle is the poor and insufficient feeding,while lack of markets and various widespread diseases of livestock add to the problem. The cattle thrive exclusively on grazing, but the pasture lands are for the most part of the year very poor owing to drought and to overgrazing. Regular overgrazing of the pastures and absence of care stimulate the growth of weeds, which reduce even to a greater extent the already low yield of such pastures. It may be expected that butchering will increase with the development of the slaughterhouse industry resulting in the reduction in the number of cattle around the slaughterhouses. This will partially relieve the pastures in these regions. Meanwhile, it will be possible to find permanent solutions by undertaking more specific measures to improve the pastures, i.e. to bring about an increase in yields per hectare by better grass composition and improvement in the quality of land. Aiming at this, it will be necessary in those regions where the pastures are overgrazed, to introduce a system by which a part of the pastures will be left unused until the grass ripens and sheds seed. In this way the overgrazed pastures will regenerate considerably in a few years. In addition, the local authorities should not allow livestock to graze on public and communal pastures at the beginning of the rainy season until the grass matures and takes root firmly. By letting the livestock grase from the beginning, the grass is not able to develop normally, and this considerably decreases,possible yields and worsens the grass composition. It would be very useful to introduce a rotational utilization of the pastures, i.e. to forbid grazing on the whole area. The local authorities together with the experts of the Extension Service can accurately set the order of utilizing the public pastures in sections. It is also necessary to introduce fees for grazing on public areas, according to the number of head of cattle and not by family. In this way considerable local funds will be raised, and they could be used to undertake wider action with regard to care, cleaning and general improvement of the pastures. With the aim of improving the feeding of livestock the Extension Service will undertake to educate the people to make hay during the rainy season and the best method of preparing and preserving the fodder for the dry season.

48. In the regions where the Extension Service is sufficiently developed, the introduction of better and more productive poultry will be continued on the peasants' farms, but on a much wider scale than so far. As far as new regions are concerned, all necessary experimentation will be done in order to find the possibility of adjusting certain breeds of fowl in respect to climatic conditions, feeding, resistance to prevailing diseases, etc. Parallel with this the Extension Service will, by means of lectures, experiments on the spot, and other methods, endeavor to introduce better poultry feeding.

49. Considering the importance of Hides and Skins in the national economy, and in particular the possibility of increasing their export and attaining higher prices, it will be necessary to work intensively on the improvement of the preparations of hides and skins for the market. Where transport facilities are better, methods of salting instead of drying will have to be retained. Drying should be performed on frames and in shade. A well organised network of purchasing system can do much for the improvement of the quality of hides and skins sold by the farmers. For that reason it is necessary to establish a public or semipublic trade organization which would enjoy the monopoly in the purchase of hides and skins (in the beginning it may be restricted to certain areas only). This agency, staffed with qualified personnel and equipped with facilities for storing and treating hides and skins will be able, by relying on co-operatives, wherever possible, or its own agents, to organize purchase from peasants. It will have to apply practices of paying according to quality and in this way encourage the producers to accept better methods of preparation and preservation of hides and skins. The agency will also have to take care of the training of personnel in purchasing and handling hides and skins and in tanning, etc.

50. In addition to the organization of a purchase trade, it will be necessary to develope the domestic tanning industry and handicrafts so that by improved processing better quality hides and skins can be produced, and from them, by yet further processing, leather for export.

## Organisation

51. The advancement of agriculture visualized for this Plan period and the laying down of firm foundations for faster development of Ethiopian agriculture in the future would not be possible without an efficient organisational structure. In order to achieve these targets it is necessary to set up various organizational units with a clear definition of their tasks and duties.

52. The Ministry of Agriculture assumes responsibility for the implementation of the whole program of agricultural development set out in this Plan. Its internal organization of staffing has to be such as to enable an efficient performance of various activities among which the most important are (a) study of the long-term and current problems concerning the development of agriculture and working out the proposals for a corresponding agrarian policy and legislation of the Government; (b) to evaluate on the basis of the studies; (c) to follow up the implementation of the programs undertaken regarding the adequacy of measures and organisational forms; and (d) to propose new measures, forms and changes necessary in various agricultural agencies and services.

53. The successful realisation of agricultural promotion requires the establishment of various technical organizations. These organizations will have to deal with big public and co-operative farms, the establishment of services by extension, veterinary, plant protection, planning and carrying out of agricultural research, etc. The type of work these organizations have to perform points to their strictly technical character. It is important to make these organizations to a smaller degree administrative, and to emphasize instead as much as possible their operational and, in fact, more business-like character. For that reason they have to be completely free in performing their professional tasks. However, for the sake of a well-integrated and planned agricultural policy, these organisations will have to be guided by the Ministry. This will be made possible, in particular, by the fact that the Ministry will have to approve the programs of the activities planned,on the basis of which the Government will provide the budgetary means,and by inspecting and controlling their operations. Although these institutions will be basically financed by the Government, they will also charge fees for their services whenever it is desirable and economically justified, bearing in mind that these practices must not endanger the promotion of agriculture which is the aim of these services.

54. In order to facilitate the establishment of big public and co-operative commercial farms, an Agricultural Development Agency will be set up. This organization will have the following main tasks:

(1) to perform all the preliminary work necessary for erecting and organizing the farms and especially to (a) select potentially suitable localities for erecting the farms, (b) organise experimentation in those regions with the aim of finding out in two to four years which varieties and sorts of crops should be grown, and what agro-techniques are the best to employ, (c) organize simultaneously meteorological observation, land survey, plant disease and pest control research, etc.;

(2) to work out designs for the erection of the farms, organize their establishment as well as the management, until they are able to operate as autonomous business concerns;

(3) to analyze, study, and advance the organisation of production and labor, the system of workers' remuneration, etc. and to extend technical and other assistance in planning and implementing the production targets;

(4) to organize bureaus for groups of farms for dealing with matters which if handled jointly will be more profitable organizationally and financially. These matters comprise, for example, the commercial service, financial bookkeeping and supervision of business, analyses and planning, research work to promote production, designing and erecting processing plants, education of the personnel who cannot be trained on the farms; repair of machinery, etc.

55. Extension Service will have to play a most important role in the process of introducing advanced methods of farming and improved technical means in the peasant sector of agriculture. To ensure the high degree of operational flexibility which is a prerequisite for the successful realization of these significant tasks, the Extension Service will be established as an operationally self-reliant technical agency of the Ministry of Agriculture. It will operate through the technical expert staff located in the provinces and in lower administrative units. However, as in the case of other agricultural technical agencies, the Ministry will gui and inspect the work of this agency and provide the necessary budgetary funds. In view of the relatively limited human and material resources which the Government will be able to employ in this field, the main principles which will have to guide the activities of this Agency during the Second Five Year Plan period will be the following:

(1) to concentrate available agricultural technical experts and specialists serving as extension workers in those regions which are near markets and main communications; in this respect the promotion of agriculture under the Community Development Scheme has to be fully coordinated with the Extension Service;

(2) to direct the extension work so that the increase of the volume of production and improvement of quality can be primarily achieved in those products which contribute most to the increase and diversification of export or to the decrease of imports;

(3) to direct activity towards those farmers who are incli more readily to accept the advice given by the extension experts. These experts will have to advise the co-operatives or other trade organizati on selling the technical means on credit and on deciding which farmers are to be given priority in obtaining the credit.

56. Research is one of the most important prerequisites for a efficient and speedy development of agriculture. In many undeveloped countries the application of known achievements in agricultural science has, in a short period of time, brought about very valuable results in agricultural production. Therefore, the organization of research in agriculture will have to be firmly established during the Second Five Year Pla period, and to this end the following major tasks are set forth:

(1) the existing research stations in Debre Zeit, Jimma an Haghere Hiwot will have to be enlarged, better equipped, and staffed wit qualified personnel in order to expand their research activities considerably;

(2) new research stations will be established - one in Tigre Province and one substation in Harrar, while six newly erected buildings as agricultural Development Centers in Arba Minch, Andassamm, Gil Abbai, Wawa, Chilga and Callafo will also be adapted to research activit

(3) a Central Cotton Improvement Center with several Regional Cotton Investigation Fields will be established to deal with resea related to the promotion of cotton production;

(4) to help the introduction on peasant holdings of those improved tools and implements which are best suited to the local conditions and requirements, and a separate station will be established to (a) conduct research in improvement of small agricultural tools and equipment and (b) to facilitate their easy handling and maintenance;

(5) the scope of research of the existing livestock breeding centers at Adametulu, New Holeta, Holeta Genet, Coffele and Andossam will be widened; in addition one highland and one lowland sheep station will be established.

All agricultural research institutions will, in the course of the next five year period, have particularly to emphasize research to promote those products which are most important for improving nutrition and increasing both the export and the supply of domestic industry with raw materials.

57. To meet the need for an efficient and organised modern veterinary service, without which no progress in the utilisation of the country's potentially rich assets in livestock can be forthcoming, an operationally self-reliant veterinary agency of the Ministry of Agriculture, shall be established. In order to secure high efficiency, this agency should set up a Central Veterinary Institute which will have to organise research and experimentation and start production of the serums and vaccines to satisfy domestic demand. With the same aim in view, this agency should organize Provincial Veterinary Centers, firstly in those areas that will have to supply slaughterhouses and the meat processing industry with livestock, and then gradually extend to all regions of livestock in the country. It will organise four quarantine stations located in Assab, Asmarq (or Massaua), Dire Dawa and Begemder.

58. To guide and supervise all the programs in the field of plant protection and pest, disease and locust control in the country, a separate, technically self-reliant agency should be established. At first it will have to concentrate its activity on those regions where measures for intensifying production during the next five years are to be carried out. The network of stations will be organized by the Agency, which will also be able to do the job for farmers, free of charge, during certain periods of time, and later, when the farmers see the benefit of such measures, it may charge them for the services rendered at rates covering the actual costs incurred. One of the urgent tasks of this Agency is to do an inventory of the most dangerous diseases and pests, and in co-operation with research Instititutions to find out those control methods which can be most efficiently applied in the circumstances.

59. Training. - Specialists, skilled personnel and operatives of various qualifications will be needed for the implementation of the numerous tasks set in the field of agriculture. Taking into account agriculture, veterinary service and forestry together, the following are the requirements of qualified personnel over the next five years:

## The Second Plan Requirements for Qualified Personnel in Agriculture, Forestry and Veterinary Service

| | Staff available in 1954 | Required in 1959 | Expected Number of Students and trainees in 1959 |
|---|---|---|---|
| Agronomists | 60 | 175 | 60 |
| Agricultural Technicians | 140 | 900 | 100 |
| Veterinarians | 3 | 25 | 15 |
| Veterinarian Technicians | 4 | 82 | 25 |
| Veterinarian Vaccinators | 120 | 320 | 45 |
| Forestry Experts | 3 | 8 | 10 |
| Forestry Technicians | 6 | 27 | 15 |
| Tractor Drivers | 2 | 80 | 25 |
| Mechanics | 3 | 60 | 20 |

Alemaya Agricultural College which now produces 31 graduates yearly should be able to graduate 60 by 1959. The need for higher educated agricultural, veterinary, and forestry personnel, due to lack of domestic faculties, will be met to a limited degree by granting scholarships for study abroad. The agricultural technicians will be trained in the agricultural schools in Jimma and Ambo within the range of the present yearly capacity of 45 to 50 graduates from each school. In Ambo approximately two thirds of this number will become agricultural technicians, and one third forestry technicians. As these two schools will not be able to meet fully the demand for middle trained technical personnel, in 1955 and 1956 three special centers will be established. Their task will be to qualify suitable village youths by one and two-year courses in agriculture for practical work in the field as Extension Field Officers. Each of these centers will qualify yearly up to 45 trainees or a total of 130 youths. The training centers should be prepared to begin work at the latest by 1956. In order to meet the demands for lower technical personnel and for various qualified agricultural operators, primarily for the development of pilot centers and rural co-operatives, the Agricultural Development Agency will organise on its farms special courses for this purpose. Concerning the middle veterinary technical personnel, the Government will establish a middle veterinary school in Debre Zeit, in which, besides veterinary technicians, each year an adequate number of vaccinators and veterinary attendants will be qualified for fieldwork by attending special courses. In order to provide necessary technical staff, the first veterinary Assistant Training School should be established. At the same time the Government should provide necessary financial means to send an adequate number of veterinary students abroad. With a view to increasing the knowledge of the employed agricultural specialists, the Alemaya College and the Jimma and Ambo vocational schools will organise refresher courses with the help of the Ministry of Agriculture, where the agricultural specialists will become acquainted with the latest achievements of science and practice in their fields of work.

60. With such a system of technical education and training of agricultural specialists and qualified workers employed in agriculture, the Ministry of Agriculture will, in the coming five years, meet the increased demand for personnel needed to implement the planned tasks. This will help the country to shoulder the responsibilities of a wider progr of agriculture in the years following the Second Plan.

# Chapter 7

## FORESTRY

1. According to very rough estimates, the total area of the Ethiopian forests many years ago covered about 28 million hectares, i.e., about 25 per cent of the total land area in Ethiopia. Around 25 million hectares of this forest area were occupied by the highland forests represented by dense and high-growth types, indicating the most favorable climatic and social conditions. As a consequence, the farming activities of the population were concentrated in the region of the highland forests, but the traditional extensive methods of agriculture, such as shifting cultivation and grazing, led to a complete disappearance, or to permanent devastation, of the major part of those forests in the densely populated regions. Thereby the principal timber resources of Ethiopia have up to now been reduced to an estimated area of 4 million hectares, mainly located in the inaccessible southwestern provinces. All the rest, amounting to about 21 million hectares of highland forests, have changed into a shrubby formation, a so-called evergreen woodland. During the past decades an additional two thirds of the estimated 3 million hectares area of the lowland and mountainous forests disappeared in a similar way, and the present total forest area in the whole country does not exceed approximately 5 million hectares-60 per cent of which are located in inaccessible regions.

Such irrational and uncontrolled utilization of forests during the past centuries produced several adverse consequences:

(a) a great part of the land is exposed to heavy erosion caused by floods and winds; some land is already completely denuded while the remainder will become denuded unless necessary measures are taken to bring an end to this process;

(b) the people that inhabit these areas suffer greatly from an almost absolute lack of firewood, so that they are compelled to use dry cow dung for fuel; this in turn has even further aggravated the problem of preserving the fertility of soil;

(c) owing to deforestation and the lack of humus, the soil does not absorb moisture sufficiently and moreover cannot hold it long enough. This makes the crops suffer from the lack of moisture more than they should, considering the amount and distribution of rainfall;

(d) particularly in the deforested areas the lack of wood for building purposes has made it impossible to erect farm buildings (barns, stables, etc.), or to improve housing conditions;

(e) the damaging effects of forest devastation on the health and life of the population as the result of climate determination, lack of drinking water, etc., which are well known.

2. The absence of a rational forest economy is the cause of the areas under tall dense forests being left with a rather poor composition of trees in respect to their quality. These forests are of very mixed composition, with much soft wood of a poor quality, while high quality, tropical hardwood is represented to much less extent. The exploitation of these forests at present is also irrational and carried out without sufficient control. It is characterized, above all, by partial cutting, by leaving the exploited terrain uncleared, and except for the logs, leaving the timber unused. Thus natural forest reproduction is made impossible due to the stifling

of young vegetation and the spread of harmful pests. In the forest coffee regions, as well as in others, it is permitted to clear the forests by burning, so that the timber is not utilized at all. The sparse forests are in most cases used as grazing ground for the numerous livestock, which, goats in particular, render practically impossible any regeneration of forests, so that only shrubbery, without any economic value, is left.

3. Ownership rights on the areas covered with forests are not settled, thefefore very little is known of which forests are really state-owned. The question of ownership is most frequently raised only when any exploitation is started. Forest legislation to regulate ownership rights and the right to utilize forests is already drafted, although sufficient authority is yet lacking, owing to underdeveloped administration, strictly to enforce the regulations.

4. Forests which have once been devasted regenerate very slowly. Due to the fact that errors in respect to forests, once made, are hard to correct, that they hit the future generations, and because there is a long time to wait for the results of afforestation, it is of paramount importance to start immediately a sound long-term policy of protection, exploitation, and regeneration of the forests. The main objectives of this policy will be the following:

(1) Preservation of the existing forests - regardless of whether they are State owned or private;

(2) Rational utilization of all the forests in order to preserve their protective character and potential productivity, and to attain maximum economic benefits, taking into consideration the interest of the present, as well as of the future generations;

(3) Afforestation of the land where the forests would serve as protection against erosion, and to protect water flow and accumulation (Koka Dam, etc.);

(4) Afforestation in the vicinity of settlements, particularly on the high plateau, in order to produce sufficient firewood (so that cow dung can be used for manure), and lumber for construction purposes. These forests would protect the soil from erosion, improve the absorbtion of rains by the soil, reduce the evaporation of moisture from the soil, and considerably improve the supply of drinking water to the population.

(5) Regeneration of the forests, in the first place in those regions where the forests have recently been devastated, by forbidding livestock grazing on those areas where natural afforestation in conjunction with care for the forests (thinning, etc.) is possible, as well as by afforestation where natural regeneration is not possible.

5. Within the framework of this long-term forestry policy the Government will, in the course of the next five years concentrate on the following tasks:

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(1) To enact urgently regulations by which a rational management in the State forests, as well as a control over the economy of private forests, should be efficiently introduced. It should be possible to execute this quickly because proposals for the regulations already exist.

(2) To continue more intensively with surveys to set the boundaries of the State forests, and then determine the quality and quantity of all the timber and work out a long-term plan of forest utilization. During the Second Five Year Plan this should be done in the accessible forests.

(3) To start a more intensive utilization of the accessible virgin State forests, either by the Government or, where this is not possible, by granting concessions. In carrying out exploitation and transformation of the forests into age-classed rotation forests, it is essential to develope more stages of wood processing by erecting sawmills and other wood processing plants. New contracts dealing with forest exploitation, that would stipulate a planned and full cutting of trees, should be made, so that the land could be prepared for reafforestation, as well as obliging those who exploit the forests to secure the means for reafforestation with an approved species of trees.

(4) To reserve a total area of 185,000 hectares of productive forest land in accessible locations, 45,000 ha of which should be brought under planned management. This total area includes nine State forests (Mengesha, Shashamana, Wofwasha, Jibat, Munessa, Din-Din, Chercher, Belleta, and Wadera, which cover 85,000 ha.) and forms the nucleus of the timber logging operations which aim at the utilization of about 650,000 cubic meters of round wood. The wood utilization on such a scale makes possible an adequate expansion of the wood industries, which should be realised by proper encouragement.

(5) Afforestation should be carried out only by competent Government bodies and the existing contracts will have to be adjusted to this principle. The royalties for timber should be applied to all the wood, and not only to the dressed technical lumber. In principle the Government should exploit the State forests on its own account, because experience has shown that much higher state revenues can be realised in this manner.

(6) To establish a field service for the protection and management of the State forests, and control over the economy of private forests. In the course of the Second Five Year Plan it will be necessary fully to realise this objective in the areas covered by all the accessible State forests. In other regions the necessary control will have to be exercised by the existing authorities, in the first place the Police force, and then by the provincial and local administrative authorities.

(7) To develope a network of nurseries for seedling production to meet the needs of the planned afforestation of the land which is to be protected, and of afforestation in the vicinity of the villages, as well s the need to regenerate the cut forests. For the afforestation of the protected areas and for the planned afforestation of the deforested areas, he nurseries should be organized by the Government. For the afforestation n the villages the nurseries should be organized, with the help of the orestry Service, by the local authorities, and by the Community Development rvice. Assistance could be given for this purpose by the primary schools, f the teachers have been previously trained to teach the pupils tree growing.

(8) Regarding the future paper and tannin factories, to establish a sufficient number of plantations of suitable trees which, together with the wood derived from the existing forests, would provide enough raw material for the new factories.

(9) To organize various feasibility studies with a view to utilizing minor forest products, such as lumber and eucalyptus for paper pulp, the mimosa tree for tannin extraction, and the incense tree for resin production. If such studies provide satisfactory results, the implementation of these projects should be started.

(10) To collect the existing saw mill equipment which is Government property and not in operation, or insufficiently utilized, and transfer it to sites where its capacity will be utilized, primarily to operate the mills for the Government's own account, or, where this is not possible, by leasing them.

(11) To forbid livestock grazing in the selected regions where the forests have been recently cut, and where there is a possibility of natural regeneration, bearing also in mind the interests of the neighbouring farmers. To forbid charcoal production in regions where forests are scarce and where the land is susceptible to erosion, or to limit it to a minimum, provided that only those trees are cut which the Forest Service has marked. By suitable measures to provide incentives to produce charcoal from offal obtained in the forests which are being exploited.

(12) To continue the training of skilled personnel according to the planned prospective requirements, having in view that more and more attention will have to be devoted to forestry in the future.

(13) Through primary schools, the Community Development, the Agricultural Extension Service, special youth organizations, and other means, to develope among the people an understanding of the importance of forests and the benefits derived from them directly and indirectly. To develope activities for mass afforestation in the villages, so that, if possible, each peasant plants a piece of land with trees.

(14) To finance this program, a total of Eth.$ 7.0 million for investment purposes is envisaged. Out of this sum, Eth.$ 6.0 million is assigned for the exploitation of the virgin forest areas on the basis of concessions, including afforestation, and 1 million for investment on the part of the Government. Besides this capital expenditure, Eth.$2.3 million will have to be spent in the form of recurrent expenditure for the extension and qualitative improvement of the forest services.

(15) With the measures foreseen and the amount to be invested, it is expected that during the forthcoming five-year period, 30 - 50,000 hectares will be afforested, and that the export of wood, including wood manufactures, will be increased to Eth.$ 8,100,000 as compared with Eth.$ 704,000 in 1953.

## Chapter 8

## FISHING AND HUNTING

1. The considerable wealth of the Ethiopian waters in fish has so far been insufficiently utilized to improve the diet of the population, and to increase export and contribute to the national economy as a whole. The main reasons for this are primarily : a) a very limited domestic market; b) sparsely populated waterfront regions, and the small number of people employed as fishermen; c) the large distances from the fish sources to the small number of centers of consumption; d) undeveloped transport facilities, and e) the very small capacity of the fishing industry, which is out of date, and as such is unable to appear successfully on the external market.

2. It will be essential in the course of the next plan period to start creating conditions considerably to extend fishing as a branch of the national economy, and to utilize the existing sources of fish more intensively. The road to development in this respect lies primarily in establishing a modern, well equipped, fishing industry and organising the sea-fishing fleet to supply the industry with sufficient fish during the whole year. To achieve this purpose the Government will try to obtain United Nations Technical Assistance in order to organize a comprehensive survey of the coastal waters in the Assab and Massawa regions. The aim of such a survey will be to determine the quantity and species of the fish, and the direction and time of their migration according to the seasons, so that more successful large-scale fishing can be organised throughout the whole year. This preliminary comprehensive survey should provide all the necessary data for planning the construction of the new fish-processing factories in Assab and Massawa. By way of technical assistance the Government will endeavor to train a larger number of domestic fishermen to operate up-to-date fishing craft, in order in time to prepare skilled personnel for this purpose.

3. Efforts will be made during this Plan to carry out necessary exploration of the lake waters along the route Modjo-Awassa, to study the existing fish species, their annual growth, etc., so that it may be possible on this route to erect, at the most suitable place, a corresponding industry for drying and canning the better varieties of fish, and processing the inferior qualities into fish meal and oil.

4. The question of the possibility and profitability of establishing a domestic industry to produce smaller craft and equipment for offshore fishing will be considered separately. This would enable a larger number of people to devote themselves to the fishing trade. These means could also be used to organize fishing co-operatives, through which the situation of the fishernent could be considerably improved and their number would also grow. The Government will endeavor to secure sufficient credits for the above mentioned craft and equipment, and grant them on favorable payment terms.

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5. To manage and co-ordinate the development of this branch of economy the Government will set up a competent body, which, considering the nature of the work, should be incorporated into one of the economic Ministries, preferably the Ministry of Agriculture. This body will also prepare all the necessary regulations in order to protect the existing fish sources from irregular utilisation and damage, and to set out the rights and obligations of the Government and local authorities in respect of the development and control of the utilization of this natural wealth.

6. Ethiopia possesses a vast number and innumerable varieties of game, some of which are unique in the world. As is the case with the forests, game is also diminishing and immediate steps must be taken if it is not to become extinct.

7. It is essential to introduce measures to protect this uniqu wealth in order to preserve it from the indiscriminate depredations of hunters. During this planned period legislation will be introduced to control the hunting of all forms of wildlife, and to ensure that hunting is carefully regulated wherever it is permitted.

8. The wildlife of Ethiopia could be a great tourist attractio and it is planned therefore to establish game reserves in certain accessible regions. One of them will be set up in the Koka area, where hippopotamuses are to be found, and another is a bird sanctuary around Lake Shala where vast numbers and unique species of birds are to be found, and where there is a house which could be used as a hostel. The third one is a sma forest reserve south of Shashamane, where hot and cold springs and an ab ance of game are to be found. It is recommended that the area north and east of the Awash Station be ceased to private enterprise, to erect rest houses for tourists, but in order to make this reserve accessible, the ro from Nazareth will have to be improved. Finally, it is planned to intro suitable types of game into the Managasha National Park, and for this purpose it will be necessary to make sure that the road to the park is impr

The total cost of these wildlife preservation projects is esti at Eth.$ 75 000, besides the additional investment which will have to be made by the Imperial Highway Authority and by private enterprise for the rest houses.

## CHAPTER 9

Recent Development

1. Prospecting is of predominant importance in the mineral economy of Ethiopia and the First Five Year Plan was, therefore, oriented toward intensive, primarily geological and then mining exploration. Since there is small **knowledge** of the mineral wealth of the country, exploration was directed toward a rather large number of mineral outcrops and in widely separated regions of the country. Prospecting during the expired five years was to show on which deposits it is possible to start mining production of minerals for which there is a demand by the developing domestic industry, as well as for export to the world market.

2. Prospecting and exploration during the First Five Year Plan were basically directed toward verifying the reserves of precious metals, mainly gold, where the reserves have been increased, and platinum. Prospecting and exploration for gold and platinum were motivated by earlier production of these precious metals. By continuing gold and platinum exploration at the deposits which had already been exploited, results have been achieved faster, and gold production has been continued, and in addition preparations have begun for the exploitation of platinum. Thus, thanks to extensive prospecting for precious metals, basis was created to utilise the invested funds, because gold has always held its place in the world market.

3. A considerable amount has been spent on prospecting, exploration, and study of the exploitation methods in the Dallol area where potash reserves have been proved, and these proved reserves will keep a high output of potash during a period of twenty years. Salt outcrops have also been indicated in other areas of the Rift Valley, as well as in Borana Province.

4. Less has been invested in prospecting and exploration for other metals, such as chromium, nickel, and lead, in Harrar Province, and the results have indicated the necessity for further intensive prospecting for these metals. Non-metal raw material has also been explored on a smaller scale, and results have revealed deposits of quartz sand for the glass industry in the Ambo region, but it will be necessary to analyse its quality. Exploration for coal in the course of the past period did not give favourable results.

5. During the First Five Year Plan extensive exploration for petroleum and gas had been undertaken on the Red Sea Cost of Eritrea, including the islands. The work here is finished with the result that several structures for drilling have been reached and in the other region, in Ogaden, the exploration works are in the final stage and definite results are expected.

6. The value of mining production in 1954 amounted E$2.3 million as against E$3.2 million as had been planned, so that the implementation of the Plan was 72 per cent on the basis of value. The incomplete implementation of the Plan occurred mostly in the output of platinum. The planned quantity of platinum was not produced because preparation had not been carried out in the Yubdo Platinum Mine for a change from manual to mechanized production; insufficient exploration which should have served to prepare production, also contributed to this reduction in quantity.

7. The implementation of the investment plan for exploration and mining development works in the course of the First Five Year Plan, up to and including the year 1954, are shown in the following table:

INVESTMENTS DURING THE FIRST FIVE YEAR PLAN

(In thousands Eth.)

| | Plan | Fulfilled | Index Number (Plan = 100) |
|---|---|---|---|
| Precious Metals | 8,300 | 5,500* | 66.3 |
| Other Metals | - | 1,150 | - |
| Non-metals | - | 10 | - |
| Coal | 300 | 20 | 0.6 |
| Salts | 4,400 | 10,000 | 227.0 |
| Petroleum and Gas | 24,600 | 10,600 | 43.1 |
| Other Min. Products | - | 290 | - |
| Total | 37,600 | 27,570 | 73.3 |

The investment plan in terms of value was not implemented in the precious metal group or in petroleum and gas, due to smaller private investment and bank loans granted than had been foreseen by the First Five Year Plan. The investment for gold in the Kibre Mengist mine is still in progress, so that results will be achieved in the Second Five Year Plan. Meanwhile, the investment out of the budget in this field has been implemented by 91.8 per cent. The same applied to oil prospecting, because exploration in Ogaden, which is in progress, should be completed in the fifth year of the Second Five Year Plan. Coal exploration did not show interesting prospects, so the allocated funds were not spent. The investment foreseen concerning salts was expended exclusively for potash, due to the encouragement of foreign capital, and the planned sum was exceeded because the initial program of prospecting and exploration was enlarged, and bigger potash deposits than were expected were found.

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*Including engaged funds.

Production Targets

8. Survey and Prospecting - The general manner of mineral exploration during the Second Five Year Plan will be somewhat changed, on the basis of exploration results achieved in the course of the First Five Year Plan, in co-ordination with the prospective development of mining and industry. Fundamentally, surveys and prospecting will be carried out as a first priority in the amount spent, on the pre-Cambrian shists, and as a second priority, on the sedimentary strata. The exploration of the pre-Cambrian shists should not only expose new deposits of gold and platinum, but also of basic metals, particularly iron, copper, chromium, nickel, and other deposits. Next in significance is the exploration of the Mesozoic sedimentary series for petroleum and the majority of non-metals. Third in priority in the amount to be spent is the exploration of the tertiary sedimentary series, in order to obtain corresponding results in prospecting for various kinds of salts, petroleum, and gas. Finally, the fourth place is occupied by the exploration of the volcanic rocks to look for deposits of building material and certain non-metals.

9. With the purpose of exploring the pre-Cambrian shists, work which had begun in the past period will be intensified, in order to increase the reserves of gold in the Adola Province and other regions as a step towards larger production in the following years. In addition, the exploration for platinum in Yubdo, which has already begun, will be continued in order to start normal production in 1956. Regarding basic metals, in addition to iron ore, exploration will be carried on for copper, nickel, chromium, lead, zinc minerals etc.

10. In order to secure the required industrial minerals it has been planned to carry out exploration for phosphates and nitrates for fertilisers, sodium carbonate for caustic soda, sulphur for sulphuric acid, and for other branches of the chemical industry, and exploration for quartz sand, clay, asbestos, etc., has also been planned.

11. Of special significance in intensive exploration, and of urgent priority, is the prospecting for iron ore at all the important deposits in the country. The forecast construction of the steel and metal industry is based on domestic iron ore, and it is therefore planned to begin iron ore production at the end of the Second Five Year Plan. Parallel with the exploration of iron ore deposits, corresponding technological research and mining development will be carried out, so that steel production may begin at the forecast time.

12. The continued exploration for salts, particularly potash, will further increase reserves, so that production will start in 1956 with 150,000 tons, and in the coming years the planned capacity will gradually

increase. Besides potash, industry will have at its disposal large quantities of sodium salts, especially in Dancalia and the region of the Red Sea. These minerals should serve as a basis for the production of polyvinyl and other products of the chemical industry which is foreseen.

13. The completion of prospecting at the petroleum and gas deposits will serve as a basis for estimating the possibilities of petroleum and gas production. If prospecting in the Ogaden and Red Sea regions attains positive results, it will be possible not only to expand the foreseen plans for crude oil refining, but also to supply the domestic chemical industry.

## Mineral Production

14. Based on the results achieved by earlier and planned exploration it is anticipated that there will be produced in the course of the Second Five Year Plan, gold, platinum, potash and other salts, iron ore, manganese ore, quartz sand, clays, asbestos, and other minerals. The production trends of these products according to the successive years of the Second Five Year Plan is foreseen, dependent on prospecting and opening of mines, as follows:

Mineral Production in 1955 - 1959

| Mineral | Unit | 1955 | 1956 | 1957 | 1958 | 1959 |
|---|---|---|---|---|---|---|
| Gold, concentrate | kg. | 800 | 1,000 | 1,200 | 1,200 | 1,200 |
| Platinum, concentrate | kg. | 10 | 15 | 15 | 15 | 15 |
| Iron Ore | t. | - | - | - | - | 200,000 |
| Manganese Ore | t. | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 |
| Potash | t. | - | 150,000 | 300,000 | 300,000 | 300,000 |
| Salt Mines | t. | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 |
| Quartz Sand | t. | 2,000 | 2,000 | 2,000 | 10,000 | 12,000 |
| Clays | t. | - | - | - | - | 5,000 |
| Asbestos | t. | - | - | 500 | 1,000 | 1,000 |

When the above mineral production, quoted in quantity, is calculated in value, then the gross value of mineral production by years moves thus:

## Gross Value of Mineral Production

In thousand Eth.)

| Year | Gross Value | Index Number (1955 = 100) |
|---|---|---|
| 1955 | 2,730 | 100 |
| 1956 | 7,435 | 272 |
| 1957 | 12,285 | 450 |
| 1958 | 12,740 | 465 |
| 1959 | 16,935 | 620 |

### Investment

15. It is proposed in the Second Five Year Plan to continue the intensive prospecting and exploration of the mineral wealth of the country, and therefore the funds for investment are considerably augmented in comparison with the First Five Year Plan. The Second Five Year Plan, for total investment in geology and mining, has foreseen the sum of Eth.74.03 million, while the First Five Year Plan allocated Eth. 37.6 million, of which Eth.27.57 million was expended. The increase of investment in the Second Five Year Plan in comparison to the funds spent during the 1949-1954 period is three times as large.

16. The planned investment of Eth 74.03 million is intended for prospecting, exploration and new mining development. The major part of the planned investments, amounting to 53.8 per cent, is assigned for prospecting, exploration, and studies, while the remaining 46.2 per cent is allocated for investment in mining development. The larger part of the funds that are foreseen for prospecting, exploration, and studies, is the result of the basic intention of the improvement of the mineral policy of the country, which aims at obtaining as soon as possible, data on the mineral deposits, their kind, volume, and location. As to the explored deposits, investment during the Second Five Year Plan is directed towards early exploitation.

17. The geological exploration of individual regions of the country, which is forecast by the Second Five Year Plan, will be determined by the actual conditions existing in the field together with the application of modern prospecting methods. The spaciousness of the country, the configuration of the land, transport conditions, the kinds and types of the deposits, demand in prospecting the application, among others, of aerial photography, photogeological interpretation, and geophysical methods. The combining of these up-to-date methods of prospecting with the classical geological methods of exploration makes it possible to set up an extensive and co-ordinated plan for prospecting during the 1955 - 1959 period.

18. The exploitation of minerals, which is to be secured by planned investments, is directed toward the production of gold, platinum, potash, iron ore, and salts, as well as the production of other minerals. The total investment for mining development amounts to about Eth$40 million, and is the result of applying modern technology. Thus, for the exploitation of gold and platinum mechanized excavation and washing have been foreseen, and the exploitation of potash will also have to be carried out by modern methods. Up-to-date technology will also have to be applied to other minerals whose exploitation is to begin in the course of the Second Five Year Plan.

19. In the group of investment for prospecting it has been foreseen that exploration will be completed in Yubdo and Kibre Mengist as a condition for mine development, while geological survey refers to a complex prospecting of the region in the Borana Province, and the geophysical survey refers to prospecting for iron ore, radioactive raw material, as well as to electromagnetic investigation for basic metals. The remaining funds are assigned for exploring some new regions when the necessity arises, for drawing topographical maps, and for completing the prospecting for petroleum, gas, and potash. The investments for mining development, besides providing means for the production of gold and platinum, have foreseen funds for opening new mines on sites where exploration shows favourable conditions, as well as considerable means for the mining development of potash in Dallol.

20. Out of the total planned value of investment projects, which amounts to Eth$284.03 million, the sum of Eth$10 million is for investment in the potash production already started in Dallol. The sum of Eth$274.03 million will be expended in the 1955-1959 period, and the details by years will be as follows

Estimated Investment by Years

In thousand Eth$)

| Year | Investment | As per cent of total |
|---|---|---|
| 1955 | 27,600 | 37.3 |
| 1956 | 14,900 | 20.1 |
| 1957 | 11,800 | 16.0 |
| 1958 | 10.400 | 14.0 |
| 1959 | 9,330 | 12.6 |
| Total | 74,030 | 100 |

The large share of investment during the first two years, and the gradual decrease of investing from 1957 to 1959 is the consequence of the completion of the plan for the mining development of potash in Dallol, since it has been planned to invest Eth$18 million in 1955, and Eth$3 millio in 1956. Apart from this project and other investments in the course of the whole five years, the investments are on an average of about Eth.10 million yearly.

The technical structure of total investment corresponds to the direction of investing, where particular emphasis is given to prospecting, and it similarly corresponds to the specific nature of investing in geology and mining. The elements of the technical structure of total investment are the following:

Technical Structure of Investment Projects During the Second Plan

( In thousand Eth.)

| Components | Investment | As per cent of total |
|---|---|---|
| Studies, Prospecting & Exploration | 45,200 | 53.8 |
| Building | 19,150 | 22.8 |
| Equipment | 19,680 | 23.4 |
| Total | 84,030[+] | 100 |

[+] Including Eth.10 million for potash production in Dallol invested before 1955 E.C.

22. The financing of the investments to a total of Eth.74,030,000 is foreseen to be mainly from foreign sources, only a small proportion will be from domestic sources, provided mainly from the budget in view of the public character of geological surveys and the production of precious and basic metals. Two-thirds of the foreign investment will be used for the exploitation of potash and for petroleum prospecting, while the remainder is intended for financing the Borana - Sidamo Project, for aerial and topographical survey, and to purchase equipment for Kibre Mongist and Yubdo.

23. Whereas the total number of persons employed in geological survey and exploitation in 1954 was 4,550, the plan forecasts that 7000 persons will be so employed in 1959, which is an increase of 54 per cent. This slow growth of employment in relation to the increase in production and investment is because of the emphasis on prospecting, but the mechanisation of the Kibre Mengist Gold Mine and the introduction of up-to-date machinery for the mining of potash in Dallol are also contributing factors.

24. It will be necessary to provide a larger number of highly qualified and skilled personnel, primarily specialists in geology and mining, to survey and plan mechanised production, and to carry out laboratory research and interpretation of geological data. In order to speed up the technical training of local staff, it is planned to establish

a mining engineering college, or higher academy, which would supply expert technical personnel for mining, geology, and mining engineering in gradually increasing numbers.

25. Of the new projects foreseen by the Second Five Year Plan, the first group consists of survey and prospecting projects, each of which is planned as a separate and complete undertaking. These projects either refer to individual minerals (gold, platinum, iron ore, etc.) or cover definite regions (the Sidamo and Borana project, Ogaden, Eritrea, etc.). This group of projects will provide a complete long-term plan of systematic exploration of mineral outcrops in the country, whereby more complete knowledge of the mineral wealth can be obtained. This work was actually started during the first Five Year Plan, and will continue even after 1959.

26. The second group of projects consists of the new mining projects for gold production at Kibre Mengist, for the production of platinum in Yubdo, for potash production in Dallol, and for the production of salt. It can be assumed that these projects will be implemented, since they are already in being, and production can be assessed in relation to the time factor. Some projects, as is the case with gold production, could be expanded in the course of the Second Five Year Plan in respect to the volume of production or to the region of mining.

27. The third group of the new projects must be connected with the results of the forecast survey and prospecting, and if these results show sufficiently extensive good quality mineral resources it will be possible during the Second Five Year Plan to start implementing the projects. This is the case in prospecting for iron ore, gold in Wollega, quartz sand, asbestos, clay, radioactive minerals, petroleum and gas, some varieties of salt, etc. In the investment plan funds have been allocated for the purpose of new mining, even in those cases where exploration has not yet ended.

28. In order to start the planning of the new projects and to begin to execute them as soon as possible, and to attain concrete results, it is necessary that the period from the end of exploration work to production should be as short as possible, and that the administrative procedure, as well as the necessary funds, should be made accessible. The co-ordination of these projects requires above all, adequate and uniform legal regulations in respect of the granting of concessions, their utilization, and of mutual obligations directed toward the goal of achieving a full utilization of the explored mineral wealth.

## Chapter 10

# ELECTRICITY

### Recent Development

1. In the course of the First Five Year Plan water power remained the most important source of energy in the country, which was natural, considering the large water power resources available. The hydroelectric sources also had priority, because prospecting for coal and oil over this period did not show any opportunity to expand these power sources.

2. Out of the 16 larger watersheds whose power has been estimated to be about 45 billion kWh, in the period of the First Five Year Plan energy supplied by the water power of the Awash River and Blue Nile (Abbai) was partially utilized. Only insignificant amounts of water power in Eritrea were utilized from the Hydro Electric Plan at Dorfu. Meanwhile, although the water power of the above-mentioned rivers was utilized only to a very small extent, the initial stages of their utilization rendered further expansion possible in the forthcoming periods. This gradual pace of expansion refers particularly to the coming stages of the construction of the Awash II, Awash III, and Awash IV projects.

3. In order to meet the needs of consumption, there had been during the First Five Year Plan, in addition to the existing sources of energy, a considerable increase attained after setting in operation the Koka Hydro Electric Plant. By erecting this hydro electric system a very good possibility has been created for further expansion on the Awash river in the course of the Second Five Year Plan, while the Hydro Electric Plant at Tis Abbai on the Blue Nile is nearing completion. The forecast erection of the Hydro Electric Plant at Dorfu III in Eritrea has not been carried out, nor the Hydro Electric Plant at Jimma. In Eritrea the Diesel Electric Plant at Massawa has been expanded and the first stage of the Steam Plant at Bellesa, with installed power of 5 000 kWh, is in the course of construction.

4. Besides the above-mentioned hydroenergy sources, during the First Five Year Plan, in some of the provincial towns smaller power plants have been constructed; for example diesel stations in Bahar Dar, Debra Markos, Jijiga, Lekempti, Assella, Shashamana, Yirgalem and Negellie (Borrana). A certain increase in the generation of electric power had been made possible by expanding some electric plants, e.g. Jimma, Dessie, Gondar, Assab and Ghion.

5. According to the existing organization, the generation of electric power was concentrated among the following three producer groups: Ethiopian Electric Light and Power Authority, Societa Electrica dell' Africa Orientale "S.E.D.A.O." (in Eritrea), and the industrial firms, which are supplied by electric power from their own sources. The trend of total production according to the above producers in the course of the First Five Year Plan is shown in the following table:

Production of Electric Energy

(In million kWh)

| | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 |
|---|---|---|---|---|---|---|
| **Ethiopian Electric Light & Power (E.E.L. & P.A.)** | 36.7 | 40.7 | 47.1 | 55.4 | 74.4 | 95.0 |
| **Societa Ellettrica dell' Africa Orientale (S.E.D.A.O.)** | 21.3 | 22.5 | 24.1 | 27.3 | 30.0 | 30.0 |
| **Industrial Firms** | 15.0 | 15.9 | 17.3 | 19.0 | 19.0 | 20.0 |
| **Total** | 73.0 | 79.1 | 88.5 | 101.7 | 123.4 | 145.0 |
| **Index number (1949=100)** | 100 | 108 | 121 | 140 | 170 | 200 |

6. In the first Year of the Five Year Plan a total production of 77.6 million kWh of electric energy had been foreseen (taking into consideration the power generated by industrial firms in that year), so that, according to the data in the above table, the production plan was realized by 94 per cent. For the last plan-year there had been foreseen a total production of 162 million kWh., while in 1954, 145 million kWh. were generated, so that the plan for this year was realized by 90 per cent. The incomplete fulfillment of the Plan is the result of lower demand, because the planned number of industrial enterprises were not erected during the First Five Year Plan. In estimating the implementation of the plan in this branch it is necessary to have in view that in the installed capacities there had been much more power (about 82,000 KW as against the 67,100 KW) than had been planned. The discrepancy between the generated amount of electricity and the power of the installed generators indicated the existing reserves of output for which consumers were lacking in that period.

7. The capacity of the electricity supply organization to produce considerably larger amounts of power with the installed generators is essentially positive. In respect of its development, the production of electric power has to remain ahead of industry in order to render possible industrial development and to satisfy the needs of new consumers. Thus the prepared and developed generating capacities in the First Five Year Plan created basic conditions for a fastor and more intensive construction of industrial projects even in the first years of the Second Five Year Plan.

8. The planned investments in electricity were exceeded in the course of the First Five Year Plan, as may be seen in the following table:

Investment in Electricity 1949-1954

(In thousand Eth.$)

| | Period : 1949 - 1954 | | Index of fulfillment (Plan= 100) |
|---|---|---|---|
| | Planned | Fulfilled | |
| Total Investment | 43 300 | 51 800 | 120 |

There has been a greater expenditure of investment funds because considerably larger generators were provided, which exceeded those that were planned by about 22 per cent. Of all the projects the Koka Hydro Electric Plant of 54,000 kVA was the most important and also participated most in investment, with Eth.$34.7 million. During the same period on the Tis Abbai Hydro Electric Plant, which is second in importance, Eth.$3.2 million was expended. For the construction of the Steam Power Plant in Addis Ababa and the expansion of the distribution network, about Eth.$5.2 million was spent.

9. In the course of the First Five Year Plan the transmission network was extended, new lines were drawn and reconstruction was carried out on the existing network. The most important projects of the transmission network constructed in the period, by which the area of power supply was considerably expanded, are the following:

| | | | | |
|---|---|---|---|---|
| Koka - Addis Ababa and Koka - Dire Dawa | 132 kV: | length | about | 410km |
| Dire Dawa - Harrar | 45 kV | " | " | 40km |
| Koka - Nazareth | 45 kV | " | " | 20km |
| Koka - Modjo | 45 kV | " | " | 17km |
| Akaki - Debre Zeit | 45 kV | " | " | 25km |
| Bahar Dar - Tis Abbai | 45 kV | " | " | 30km |

In addition, the 15 kV transmission network in Addis Ababa and surroundings has been expanded and the laying of underground cables has begun. The reconstruction of the network in Jimma, Dessie, Gondar, Assab and other places has been completed and high and low tension transmissions have been constructed, or are still under construction, in Shashamanne, Assela, Lekempti, Debra Markos, Bahar Dar and Negellie, and a low tension network in Jijiga. From Gondar to Azozo a 15 kV transmission line of about 10 kilometres has been built, and the construction of the 15 kV transmission line Shahamanne-Awassa is proceeding.

Production targets

10. It is envisaged that the rapid growth of electric power production will also continue over the Second Five Year Plan. In 1954 about 145 million kWh have been generated, and it is planned in 1959 to reach 355 million kWh, which means that the average annual increase will be 21 per cent. Such a pace of growth represents a large acceleration of production, which is justified in view of the significant intensification of economy forecast by the Second Five Year Plan.

11. Increased production will be made possible, primarily, by further utilization of the installed power generators of the projects which were built during the First Five Year Plan; secondly, by completing the large hydropower sources at Tis Abbai and Awash II, as well as by erecting a larger number of new hydroelectric and thermoelectric power plants in the country. It is not possible to determine precisely the level of electric power production in the Plan, because production will depend upon the increase of power-demand which in turn will depend for a large part on the completion of the big industrial projects. Having in mind the predicted rate of increase of electric power production, and the estimated requirement set by the Plan, it is anticipated that production by years will develope as follows:

## Electric Power Production 1955 - 1959

(In million kWh)

| | 1955 | 1956 | 1957 | 1958 | 1959 |
|---|---|---|---|---|---|
| Ethiopian Electric Light & Power Authority | 134 | 143 | 163 | 225 | 260 |
| Societa Ellettrica dell' Africa Orientale | 35 | 55 | 60 | 65 | 70 |
| Industrial Firms | 21 | 22 | 22 | 25 | 25 |
| Total: | 190 | 220 | 245 | 315 | 355 |

The foreseen production will be ensured by the installations which are driven mainly by water power, and it is anticipated that the comparative relation of the output of hydropower and thermal power will be 72 : 28 respectively. The total value of generated electricity in 1954 amounted to Eth.$11.9 million, whereas it is anticipated that total production in 1959 will reach Eth.$28.3 million.

12. The Plan has forecast the consumption of electricity in two fields: consumption for the requirements of National economy, and consumption by the population and municipalities. Consumption for economic requirements covers in the main the foreseen consumption by industrial enterprises and other branches of economy. It is expected that the participation of separate groups of consumers and the losses in total production will be approximately as shown in the following table:

## Participation in Electric Power Consumption

(In per cent of Total)

| | 1954 | 1959 |
|---|---|---|
| Economy | 42.5 | 58.5 |
| Public Consumption and Illumination of Towns | 40.0 | 23.0 |
| Own Consumption and Losses | 17.5 | 18.5 |
| Total: | 100 | 100 |

Consumption of electricity for economic requirements is estimated to be 208 million kWh in 1959, while in 1954 it amounted to 61.5 million kWh, so that the increase by 1959 will be 340 per cent. The amount of electricity for public consumption and illumination of towns will increase, according to estimates, from 58.5 million kWh in 1954 to 81 million in 1959, which is an increase of 39 per cent.

13. The planned quantities of electric power will be generated, as has been stated, by the following three groups of producers : Ethiopian Electric Light & Power Authority, Societa Elettrica dell' Africa Orientale, and individual industrial firms. The increase of production of the EELPA will be obtained by the interconnected System in which the new Hydro Electric Plant Awash II will begin production in 1958, and increase production by 55 million kWh, and in 1959 by 75 million kWh, while the final capacity will be 174 million kWh. Increased production by the Self Contained System from 9 million kWh in 1955 to 25 million in 1959 will render it possible to put into operation successively new and enlarged factories. Concerning new projects, it is planned to build power plants in Dilla, Makalle, Axum, Asba Teferi, Bonga, Debre Tabor, and Adua. Expansion of the following power plants is planned : Jimma, Dessie, Hagere Hiwot, Debre Berhan, Gondar, Debre Markos, Tirgalem, Negellie Borana, Assab, Jijiga, Wolamo, Soddo, Assella, Lekempti and Shashamanne. The Tis Abbai System should gradually increase output from 15 million kWh in 1955 to 25 million kWh in 1959, while the capacity in its first stage is set at 57 million kWh. Concerning the S.E.D.A.O. group, after the construction of the first stage of the Thermal Power Plant at Bellesa, the existing generating power will increase by 5 000 KW. Industrial enterprises will build power plants only in those cases when the factory sites render it impossible for them to be supplied by electricity from the public network.

14. Parallel with the forecast production and consumption, a corresponding system of transmission lines and substations will be constructed, as well as distribution systems. The construction of the following transmission lines is planned:

New Power Plant Awash II - Koka - 25 km
Koka - Akaki - 75 km
Akaki - Sabata - Gafarsa - 25 km

It is also planned to erect a necessary number of substations, as well as distribution systems, which should supply about 70,000 new consumers in an area with 800,000 population.

**Investment**

15. It has been forecast that toal investment in electricity in the course of the Second Five Year Plan will amount to Eth.$83.5 million. This volume of investment indicates that electrification is given even greater impetus in the 1955 - 1959 period than it had during the First Five Year Plan, when Eth.$51.8 million were expended in this branch of economy. The growth of investment by 60 per cent makes possible the foreseen increase of production of 245 per cent. Of the anticipated Eth.$83.5 million, Eth.$7.5 million are allocated for the existing projects which are included in the Second Five Year Plan, and Eth.$18.2 million for new projects which will be completed after 1959. Accordingly, Eth.$57.8 million will be expended on investment in electricity during the 1955 - 1959 period.

16. As has been mentioned, total investments to the amount of Eth.$83.5 million have been planned for the erection of power plants, transmission lines, substations, and a distribution network. The ~~investments for electric~~ power sources are grouped according to systems. Thus, the sum of Eth.$32 million, allotted for the Interconnected System is intended for the construction of two key projects, viz., the Hydro Electric Plants Awash II and Awash III, whose construction is to begin in 1955 and 1959. Each of these hydroelectric power plants will have a capacity of 45,000 kVA. The investment of Eth.$19.9 million allotted for the Self Contained System is to be used for the construction of 8 new thermoelectric and hydroelectric plants, the enlargement of 14 existing separate plants of smaller capacity, and the construction of the thermopower plant at Bellesa in Eritrea, as well as separate power stations needed for the new steel plant. The investments in the Tis Abbai System, amounting to Eth.$5.9 million, have been foreseen for the erection of the first hydropower project on the Blue Nile. The installed capacity of this project in the first stage is to be 9,600 kVA, and construction will continue. The investment of Eth.$25.2 million is intended for developing the whole transmission system, which will have to be extended considerably to new consumer regions during the Second Five Year Plan. Investments according to the groups and their participation in total investment are given in the following table:

## Investment in Electricity by Groups 1955 - 1959

(In thousand Eth.$)

| Group of Investment | Investment | As per cent of total |
|---|---|---|
| Interconnected system | 32 000 | 38.5 |
| Self Contained System | 19 900 | 23.8 |
| Tis Abbai System | 5 900 | 7.1 |
| Industrial Firms | 450 | 0.5 |
| Transmission Lines, Substations and Distribution | 25 200 | 30.1 |
| Total: | 83 450 | 100 |

17. The technical structure of investment in electricity is the result of the specific nature of this branch of industry, where equipment is the dominant element of the investment value, while in the construction of the hydropower projects, the share of building works also takes up a significant amount. The technical structure of the total investments in electricity may be seen in the following table:

## Technical Structure of Investments 1955 - 1959

(In thousand Eth.$)

| | Investment | As per cent of total |
|---|---|---|
| Studies & Prospecting | 6 030 | 7.2 |
| Land | 1 300 | 1.5 |
| Building | 23 420 | 28.0 |
| Equipment | 52 390 | 63.0 |
| Others | 310 | 0.3 |
| Total: | 83 450 | 100 |

18. The growth of investment in electricity over the Second Five Year Plan is expressed in the figures of investment by years. The average investments in the 1955 - 1959 will be between Eth.$10 to 13 million, and the invariable growth by years is the result of steady progress in completing certain larger projects and starting construction on new ones. The total investments in the 1955 - 1959 period distributed by years are shown in the following table:

Investments by Years 1955 - 1959

(In thousand Eth.$)

| Year | Investment | As per cent of total |
|---|---|---|
| 1955 | 9 598 | 16.6 |
| 1956 | 10 050 | 17.5 |
| 1957 | 11 300 | 19.6 |
| 1958 | 13 050 | 22.6 |
| 1959 | 13 755 | 23.7 |
| Total: | 57 753 | 100 |

19. The provision of the funds to be invested in the course of the Second Five Year Plan has been foreseen, as for the other branches of industry, from both domestic and foreign sources. The characteristics of investment in electricity, as related to the sources of financing, are shown in the relatively large participation of means from its own funds, which comprise 52 per cent of the total investments, representing almost all the funds derived from domestic sources. The means from foreign loans, amounting to Eth.$38.2 million, have been foreseen exclusively for the purchase of equipment from abroad.

20. The number of persons employed will increase during the Second Five Year Plan parallel with the construction of the new projects for production and distribution. Due to the fact that the participation of labor in electricity is comparatively small, and is carried out mainly by specialists, the increase in the number of employees is relatively small. This may be observed from data which indicate that in 1954 this industrial branch employed 1 800 workers and officials, while in 1959 an increase to 2 580 is expected. Of the planned number of newly employed it will be necessary primarily to provide highly qualified and skilled technical personnel.

## New Projects

21. The new projects in electricity are for the most part determined by the sources of power as well as by the transmission network. The biggest new projects for generating electrical power in the Second Five Year Plan are the Hydro Electric Plants Awash II, Awash III, the Hydro Electro Plant at Tis Abbai, the Thermo Electric Plant at Bellesa and the electric plant for the steel industry. The projects for the construction of transmission lines may also be included among the larger projects.

22. Considering the forecast intensive industrial development and settlement projects, as well as the anticipated increase of electricity consumption by other economic branches, depending on the locations and intensity of the needs, new regions of consumption and supply lines may be created. Thus, depending on the site of the projects and other consumers, a need might arise to supply the regions of Dessie and Jimma with electricity. In that case it would be necessary to carry out studies and build new hydroelectric projects on the rivers Borkenna and Ghibi Jimma, respectively. A similar intensive development of economy and settlement in the Wabi Shebelli region could create a need to design a new project for generating electricity. These forecasts emphasize the necessity of carrying out the investigation of the water resources according to a multipurpose scheme, in order to utilise the water resources for future power production, for irrigation, and for water supply for the population. A larger concentration of power consumption in the Shashamanne-Awassa area could hasten the realigation of a new 132 kV transmission line Awash II - Asella - Shashamanne - Awassa.

23. Having in mind a long-term economic development of the country, which will call for a further steady increase of electric power, it is necessary, during the Second Five Year Plan to undertake studies which are directed toward a long-term trend in the development of electric power. These studies should be the basis for new projects which will be realised in the following periods. In this respect it is necessary, in the course of the Second Five Year Plan to make a study of all kinds of power sources and assess the possibilities and effects of their utilization. In continuance of the concrete studies commenced in the Second Five Year Plan, priority should by all means be given to the investigation of the possibilities of further expanding the hydroelectric system of the Awash and Blue-Nile rivers. In the same way the possibility of connecting individual systems and creating co-ordinated and more economical solutions in respect of power has prospective significance for studies and new designs in this field. Such undertakings in this field will form essential pre-planning for electricity in the coming periods, and will create conditions for a faster economic development of the country.

## Chapter 11.

## MANUFACTURING INDUSTRY

1. Industrial development is a very recent factor in Ethiopia's national economy. At the beginning of the First Five Year Plan the gross annual value of production of the manufacturing industry did not exceed Eth.$72.6 million, a negligible contribution to the national production. Only in the course of the First Five Year Plan did industrial development accelerate, so that the gross value of production increased to Eth.$116.3 million. The average annual rate of growth of manufacturing industry over the First Five Year Plan was 10 per cent - much higher than in the previous period. The speeding up of the industrial production was encouraged by additional investment; the total investment expenditures in manufacturing over the First Five Year Plan period reaching Eth.$80,5 million. However, the development trend even in this period retained its former characteristics, primarily to build industrial projects which would process the existing raw materials and which would supply the domestic market with consumers' goods.

2. The industrial development over the First Five Year Plan was determined, in the first place, by the existing raw materials, primarily from agriculture, animal husbandry, and forestry. Another important factor was the growing demand for textiles, footwear, cement, etc., due to the overall growth of economy and the rising standard of living. By processing the domestic raw materials and expanding the textile and shoe industry, it had been possible gradually to supply the market with the domestic essential industrial commodities. A positive consequence of such industrial orientation has been a gradual reduction in the import of basic consumers' goods, such as sugar, oil, salt, beverages, textiles, footwear and others.

3. Due to the faster growth of the consumers' goods industries, anticipated by the First Five Year Plan, the development of other industrial groups, needed to meet the needs of the growing economy, was neglected. Some industrial branches, such as the chemical, metal and leather industries did not get an adequate place in the framework of industrial progress. The reason for this is that conditions for the development of these branches had not been created earlier, on account of a shortage of raw materials, power, and financial means. Lack of entrepreneurship and of industrial promotion, as well as of mature projects, had also contributed to the underfulfillment of the industrial program conceived by the First Five Year Plan.

4. The development of manufacturing industry in the course of the First Five Year Plan led to an increase of industrial production, due to the considerable growth, firstly of the textile industry, but also of the food industry and the tobacco-processing and beverage industries.

Gross Value of Production 1949 - 1954

Thousand Eth.$

| Branch of Industry | 1949 | 1954 | | Index of fulfillment (Plan=100) | Index (1949=100) |
|---|---|---|---|---|---|
| | | Planned | Fulfilled | | |
| Food Industry | 32,670 | 62,900 | 45,300 | 72 | 139 |
| Beverages | 7,880 | 10,500 | 9,800 | 93 | 124 |
| Tobacco Manufacturing | 3,300 | 2,000 | 4,500 | 225 | 136 |
| Textile Industry | 14,600 | 34,600 | 39,000 | 113 | 267 |
| Leather & Shoe Industry | 2,210 | 13,700 | 4,500 | 33 | 204 |
| Wood Industry | 2,660 | 3,300 | 2,900 | 88 | 109 |
| Building & Nonmetal Industry | 4,970 | 6,600 | 5,500 | 85 | 111 |
| Printing & Publishing | 710 | 5,500 | 1,400 | 26 | 197 |
| Chemical Industry | - | 9,600 | 950 | 10 | - |
| Metal Processing Industry | - | 22,900 | - | - | - |
| Others | 3,600 | 3,900 | 2,500 | 64 | 70 |
| Total: | 72,600 | 175,500 | 116,350 | 67 | 161 |

However, the First Five Year Plan targets concerning the industrial production were not achieved because the metal industry as well as chemical and leather industries were not started at all. The meat processing industry, also, did not fulfill the planned targets, because the investment program was not completely implemented. The overfulfilment of the targets by the textile industry and the tobacco manufacturing industry could not contribute to a fuller implementation of the Plan.

5. The bulk of investment was directed to the textile and food industries, and in a smaller degree to the building material, wood, and shoe industries. Out of the total investment of Eth.$80.5 million over the First Five Year Plan period, these five industries attracted over Eth.$72 million, or 90 per cent. On the other hand, investment in the chemical and metal industries fell completely short.

## Investment in Manufacturing Industry During the First Five Year Plan Period

Thousand Eth.$

| Branch of Industry | 1949 - 1954 | | Index of fulfillment Plan = 100 |
|---|---|---|---|
| | Plan | Fulfilled | |
| Food & Beverage Industry | 20,000 | 26,460 | 132 |
| Tobacco Manufacturing | 500 | 460 | 92 |
| Textile Industry | 20,300 | 39,400 | 192 |
| Leather & Shoe Industry | 2,500 | 1,250 | 50 |
| Wood Industry | 1,300 | 1,360 | 105 |
| Building & Nonmetal Industry | 1,600 | 3,600 | 225 |
| Printing & Publishing | 1,500 | 350 | 23 |
| Chemical Industry | 1,700 | 740 | 43 |
| Metal Processing Industry | 2,600 | 1,050 | 40 |
| Others | 5,100 | 5,810 | 114 |
| Total : | 57,100 | 80,480 | 141 |

## Production Targets.

6. The industrial program for the Second Five Year Plan represents a continuation of industrial development from the First Five Year Plan period, and at the same time attempts to deal with the industrialization tasks which arise from a long-term development of the national economy. For these reasons the development of manufacturing industry which is anticipated for the Second Five Year Plan is considerably more intensive and diversified. The pace of the future industrial growth is based on the analysis of the overall economic development of the next five years, in coordination with the forecast development of the other economic activities.

The industrial program is integrated with agriculture, mining, power, transport, and commerce, so as to achieve mutual stimulation and to speed up the economic growth. The program has also considered the availability of the labour force, the need to increase employment, the growth of the population and its income, the growing demand for industrial goods, the saving capacity of the national economy, international economic relations, and other factors.

7. As the largest and potentially most abundant source of raw material, agriculture exerts great influence on industrial development in Ethiopia. This is true not only in respect of the varieties and Quantity of agricultural raw materials, but also with regards to the diverified possibilities of processing them. In this connection industry is most directly linked with agriculture, encouraging and accelerating its development and increasing the income of the agrarian population, as that the processing industry development program for the Second Five Year Plan is directed toward livestock and meat processing, fish canning, production of quality edible oil, sugar, processing fruits, vegetables and milk, production of beverages, etc. Similarily, over the Second Five Year Plan, industry will expand the utilization of raw materials from the wood sector, not only for processing, but also as raw materials for the chemical industry.

8. The co-ordination of the industrial and agricultural programs points to a fuller utilization of agricultural raw material and consequently to the development of subsequent phases of the processing industry. The Plan forecasts that the raw hides and skins from the newly erected slaughterhouses will be processed and manufactured into final products (leather, footwear, and leather goods), instead of being exported in a raw state. The same applies to the processing of oil seeds, fruits and vegetables, and others, so that industrial development will encourage the growth of agricultural production by raising the demand for agricultural raw material. Agriculture will have to supply industry with sufficient quantities of textile raw material, since the Plan has foreseen the erection of factories for manufacturing cotton, flax and woollen goods, as well as sacks and ropes. Due to the increasing sales, incomes of the agricultural population will grow, increasing the purchasing power with a consequence of raising the need for manufactured goods. Textile and leather products will be consumed, in a large measure, by the agricultural population, due to the growth of incomes and purchasing power. Mutual effects of production and consumption in agriculture will call for a further growth of farm and animal production, and will increase demand for equipment, and industry will have to produce improved agricultural tools and implements, as well as various articles for household consumption.

9. The extensive investment program of the Second Five Year Plan will be largely realized through building and construction, which will call for large quantities of building material. Nonmetal raw materials, of which there are sufficient quantities in the country, are an ample basis for the development of this industry. Prospecting for the necessary quantities of nonmetal raw materials is foreseen by the mining program, so that a sufficient supply of these raw materials is expected to make possible the development of this industrial group. Having in mind the demands of building and construction, as well as the availability of raw materials, the erection of factories for the production of cement, asbestos-cement products, sheet glass, ceramics, bricks, tiles, lime, etc.

has been planned. In addition, the expansion of the capacity of the wood industry has been anticipated (timber, plywood, building carpentry, furniture, etc.), as well as the production of iron bars, iron sheets, building fixtures and other. Thus, the development of these industrial groups is closely linked with the demand for building materials for the implementation of the investment program, as well as with the growth of production of mining and forestry.

10. The next set of production tasks in manufacturing industry refers to the domestic steel industry and the development of the metal processing and electrical industries. Setting the steel industry into operation is actually a part of a long-term industrial orientation which should gradually lead to a machine building industry. Prospecting for iron ore, supplying power, and studies and solutions of technological process represent coordinated operations, of which many have not been performed by the domestic industry so far. The Second Five Year Plan has foreseen the performance of all preliminary work, and that building will begin, so that the erection of the steel industry may be completed in the Third Five Year Plan period. Simultaneously the metal processing industry should be erected for well known reasons, and until the steel industry provides sufficient quantities of domestic raw materials, it has been planned to supply the metal processing and electrical industries partly from the Akaki steelworks and partly by import.

11. The chemical industry has also been given a corresponding place in the industrial program of the Second Five Year Plan. The new capacities of this industry are mainly based on domestic raw materials for the production of pulp for paper, caustic soda, sulphuric acid, carbon bisulfide, pharmaceutical products, tanning material, glass, and soap. Meanwhile, in the development of the chemical industry, such factories are also foreseen which for the time being are not provided with domestic raw materials, but they will have to be erected, considering the accelerated economic development of the country (oil refinery and tyre plant).

12. The industrial program for the Second Five Year Plan aims at accelerating the industrial production both as a whole and in the individual branches:

## Gross Value of Production 1954 - 1959

Thousand Eth.$

| Branch of Industry | 1954 | 1959 | Index Number (1954 = 100) |
|---|---|---|---|
| Food Industry | 45,300 | 140,705 | 310 |
| Beverages | 9,800 | 16,900 | 172 |
| Tobacco Manufacturing | 4,500 | 6,500 | 144 |
| Textile Industry | 39,000 | 88,860 | 228 |
| Leather & Shoe Industry | 4,500 | 25,400 | 562 |
| Wood Industry | 2,900 | 5,700 | 196 |
| Building & Nonmetal Industry | 5,500 | 28,000 | 510 |
| Printing & Publishing | 1,400 | 7,300 | 520 |
| Chemical Industry | 950 | 36,100 | 3,800 |
| Steel, Metal & Electro Industry | - | 10,600 | - |
| Others | 2,500 | 3,500 | 140 |
| Total : | 116,350 | 369,575 | 316 |

The program foresees that the total output of the manufacturing industry will more than treble. Naturally, considerably higher rates of growth are foreseen for those branches of industry which are less developed, but are of a propulsive character, or help export. This also refers to the production of certain commodities, the quantities of which will have to increase in the course of the Second Five Year Plan, as follows:

## Production of the More Important Industrial Products 1949-1959

| Article | Unit | Actuals 1949 | Actuals 1954 | Plan 1959 |
|---|---|---|---|---|
| Meat (Frozen) | t | 683 | 5,500 | 35,000 |
| Meat (Canned) | t | 1,290 | 1,000 | 7,000 |
| Sugar | t | 16,181 | 38,000 | 60,000 |
| Salt | t | 132,292 | 158,000 | 275,000 |
| Edible Oil | t | 4,350 | 4,800 | 12,000 |
| Flour | t | 23,000 | 24,000 | 51,000 |
| Macaroni | t | 2,700 | 2,800 | 3,100 |
| Beer | hctl. | 41,780 | 67,000 | 85,000 |
| Wine | hctl. | 12,900 | 18,600 | 30,000 |
| Cigarettes | ,000 pcs. | 252,000 | 370,000 | 500,000 |
| Cotton Fabrics | ,000 m2 | 5,000 | 21,500 | 74,000 |
| Rayon Fabrics | ,000 m2 | - | - | 6,000 |
| Gunny Bags | ,000 pcs. | 1,700 | 2,800 | 6,000 |
| Leather Shoes | pair | 203,000 | 248,000 | 2,150,000 |
| Canvas & Rubber Shoes | pair | - | - | 1,300,000 |
| Timber | m3 | 16,300 | 12,500 | 20,000 |
| Plywood | m3 | - | 1,200 | 3,000 |
| Furniture | ,000 Eth.$ | 350 | 450 | 1,500 |
| Matches | ,000 pcs. | 11,800 | 16,000 | 25,000 |
| Glass Bottles | ,000 pcs. | 3,800 | 7,500 | 14,000 |
| Cement | t | 26,860 | 29,000 | 210,000 |
| Bricks | ,000 pcs. | 5,670 | 8,000 | 30,000 |
| Mosaics | m2 | 30,000 | 65,000 | 95,000 |

**Investment.**

13. The realization of the production tasks of the manufacturing industry which are forecast in the Second Five Year Plan calls for a maximum mobilization of the productive factors, a full utilization of the existing capacities and considerable investment for the new industrial projects. The Plan has foreseen that primarily all the existing projects and expansions of the existing factories will be completed, and that the existing industrial capacities will be utilized to a larger extent, because this will increase production in the shortest time. It is, therefore, anticipated that the production of cotton yarn, fabrics, gunny sacks, leather, meat, sugar, cigarettes and other consumers' goods will increase even in the first years of the Second Five Year Plan. This will go far towards satisfying the demand for these commodities on the domestic market.

14. Owing to the fact that the projects already started and the existing industry are neither of sufficient capacity nor of a desired structure, the Second Five Year Plan allocates important investment means for the further expansion of manufacturing industry. The extent and structure of industrial investment for the Second Five Year Plan is estimated within the framework of the overall economic development of the country. While estimating the financial means which have to be invested in various branches and projects, the available factors of production, as well as the actual conditions and circumstances of the country have been considered. As a consequence the technical structure of the forecast investment differs somewhat from the corresponding standards in other countries. It should be mentioned that the planned investment sums by years and by projects are of a preliminary character. The feasibility studies and the elaboration of the designs will provide final estimates of the necessary investments, to be used to allocate the financial means in the annual plans. It will, therefore, be essential that the competent Government Agencies begin immediately to work on the studies and designs of various projects in order to make possible an undisturbed realization of the program.

15. As a part of the long-term program of industrial development the 1955-1959 investment plan is not restricted only to the coming five year period. The construction of some industrial projects was started in the last years of the First Five Year Plan, while the building of a certain number of industrial projects, due to their size and duration of construction, is expected to continue after 1959. Thus, out of the total investment sum of Eth.$425.9 million, in the period before 1955 Eth.$25.6 million have been expended, while it is planned to expend Eth.$81,9 million after 1959. Hence, industrial investment in the 1955-1959 period will amount to a total of Eth.$318.5 million.

16. The allocation of the Second Five Year Plan industrial investment funds to individual branches of industry has been estimated as follows:

## Investment by Branches During the First and Second Five Year Plans

Thousand Eth.$

| Branch of industry | Period<br>1950 - 1954 | <br>1955 - 1959 |
|---|---|---|
| Food & Beverage Industry | 26,460 | 73,660 |
| Tobacco Manufacturing | 460 | 1,440 |
| Textile Industry | 39,400 | 32,625 |
| Leather & Shoe Industry | 1,250 | 11,100 |
| Wood Industry | 1,360 | 2,350 |
| Building & Nonmetal Industry | 3,600 | 35,390 |
| Printing & Publishing | 350 | 800 |
| Chemical Industry | 740 | 96,550 |
| Steel, Metal & Electro Industry | 1,050 | 51,050 |
| Others | 5,810 | 12,500 |
| Total: | 80,480 | 318,465 |

If compared with the First Five Year Plan, the investment ~~estimated~~ for the Second Five Year Plan should increase almost fourfold, with the result of forcing the industrial development as a whole, and particularly the individual branches. The allocation of the investment funds points primarily to the development of the chemical industry (about 30 per cent of total industrial investment) then the food and beverage industry (about 23 per cent), the steel, metal and electric industry (about 16 per cent), and the building and nonmetal industry (about 11 per cent). The Plan has foreseen considerably less investment for the textile industry, which has grown rapidly in the course of the First Five Year Plan, and whose capacity is such as to satisfy domestic consumption during the coming years.

17. The accent of the investment program on the new industrial branches which did not previously exist is in fact a new industrial orientation, different from the previous one. The new industrial branches will necessarily require considerably more financial means, especially from abroad. In addition, it will be necessary to create business organizations for the construction of big projects, train specialized personnel, develop technical culture, and undertake many measures in order to ensure that the foreseen construction of the industrial projects will be carried out on time.

18. The technical structure of investment anticipated in the Second Five Year Plan is also of great significance for the fulfillment of the industrial program. Of the total planned investment of Eth.$425.9 million the following sums are to be used for individual components:

Technical Structure of Investment During the Second Five Year Plan

| Components | Thousand Eth.$ | As per cent of total |
|---|---|---|
| Studies & Prospecting | 16,890 | 4.0 |
| Land | 5,944 | 1.4 |
| Building | 124,575 | 29.2 |
| Equipment | 268,141 | 63.0 |
| Motor Vehicles | 9,580 | 2.2 |
| Others | 820 | 0.2 |
| Total: | 425,950 | 100.0 |

Equipment is expected to take almost two thirds of total investment, which means that in the case of the other components, economy in expenditure must be realized. A comparatively large participation of studies and prospecting, estimated at 4 per cent of the total value of the investment, is characteristic of the foreseen industrial program, because new projects with a more complex technology demand more extensive studies and research. A larger participation of construction works has been planned, only for such industrial branches as the food and beverage industry, building-material industry and the textile industry. The value of equipment in the chemical industry, the steel, metal and electric industries is two and one-half times as large as the value of construction works, since the participation of construction expenditure has been reduced in respect to the total value of investment. It is evident that by increasing the share of equipment in the total investment there will be an increase in capital output ratio which is a sign of more favourable economic results.

19. The annual investment amounts to be expended will successively grow from year to year. This will accelerate the pace of growth, and simultaneously will extend the opportunity to prepare on time the necessary prerequisites to implement the set plan.

## Investment in Manufacturing Industry by Years

| Year | Thousand Eth.$ | As per cent of total |
|---|---|---|
| Before 1955 | 25,560 | 6 |
| 1955 | 35,795 | 8.4 |
| 1956 | 57,445 | 13.5 |
| 1957 | 65,255 | 15.3 |
| 1958 | 74,795 | 17.6 |
| 1959 | 85,175 | 20.0 |
| After 1959 | 81,925 | 19.2 |
| Total: | 425,950 | 100 |

The gradual yearly increase of investment will facilitate the influx of domestic and foreign financial means, as well as the preparation of the technical and economic personnel, which is one of the very important factors for a realistic set-up of the planned tasks.

20. The growth of investment from year to year renders possible a timely execution of the preparatory works for the new big projects. By investing 6 per cent out of the total investment program before 1955 the projects in construction have been, in the main, completed, and the capacity of the existing factories extended. This will increase industrial production even in 1955 so that the investment burden over the first years of the Second Five Year Plan will be somewhat alleviated. The investments in 1955, which amount to 8.4 per cent, contain considerable sums for studies, research, designing and preparatory building works. The increased investments in 1956 and 1957, which amount to 13.5 per cent, and 15.3 per cent respectively of the total investment program, represent the first stage of intensive construction of the food industry, leather and shoe industry, building, and nonmetal industry. The largest investment activity is planned for 1958 and 1959 and the subsequent years. This will call for a maximum of financial means (17.6 per cent and 20 per cent respectively of the total) because the erection of the largest and most expensive projects has been foreseen for this period (the steel mill, metal and electric industry projects, sugar factory, cement, shoe factory, paper and viscose factories, with their auxiliary industries).

21. The financial means for the construction of the industrial plants are expected to be obtained from both domestic and foreign sources. Considering that big and expensive industrial projects will be built with a predominant participation of equipment which must nearly all be imported,

it has been planned that foreign financial means will participate with 62 per cent in the total value of the investments, leaving domestic means to account for 38 per cent. It is expected that the budget, bank loans and funds of private investors will provide approximately one third of the domestic resources needed for financing the industrial program.

22. In the course of the elaboration of the Plan, for understandable reasons, the micro-location for each new industrial project could not be foreseen. It will be possible to make a decision on this only on the basis of detailed studies and investigation of all the factors and conditions concerned, but new projects should be erected in all parts of the country, providing the feasibility studies allow it. The location of the new industrial projects will have to be decided primarily according to the raw material and power sources, transport facilities, and the marketing and consumption analyses, with the view of maximizing the returns and profitability.

## Employment.

23. The growingindustrial production will demand a considerable additional labour force, workers and employees of various occupations and skill. Considering that there is no such personnel at present it is necessary to insist that it be trained faster in the country and abroad. The variety of planned industrial projects will demand that the training of technical personnel be ensured by the University and secondary schools, while different methods will have to be used to train the skilled workmen. It should be emphasized that the timely training of the needed labour force and technical personnel is one of the essential conditions for the implementation of the Second Five Year Plan industrial targets.

24. In the course of the First Five Year Plan the number of persons employed in industry increased from 18,700 in 1949, to 27,600 in 1954. By expanding the existing industrial capacity, and by building new projects, the Second Five Year Plan predicts that in 1959 the number of employed persons will mount to about 57,900. The growth of employment in individual industrial branches and manufacturing industry as a whole in 1949, 1954 and 1959 is anticipated as follows:

**Employment in Manufacturing Industry 1949 - 1959**

| Branches of Industry | 1949 | 1954 | 1959 |
|---|---|---|---|
| Food Industry | 6,500 | 10,200 | 21,900 |
| Beverages | 960 | 1,350 | 1,490 |
| Tobacco Manufacturing | 410 | 450 | 600 |
| Textile Industry | 4,770 | 10,100 | 19,800 |
| Leather & Shoe Industry | 940 | 960 | 4,260 |
| Wood Industry | 1,800 | 1,450 | 1,800 |
| Building & Nonmetal Industry | 720 | 1,290 | 3,270 |
| Printing & Publishing | 320 | 400 | 1,050 |
| Chemical Industry | - | - | 1,530 |
| Steel, Metal & Electro Industry | - | - | 450 |
| Others | 2,280 | 1,400 | 1,750 |
| Total: | 18,700 | 27,600 | 57,900 |

The total increase of employment in the manufacturing industry has been estimated to be 30 thousand, of which over 9.5 thousand will be employed in the textile industry. The large increase of employment in the textile industry facilitates to a certain extent the program of training the industrial workers and other personnel, because the existing factories, which already have skilled personnel, can assist in extending further training. Meanwhile, the new industrial branches, such as chemical, steel, metal and electric industries will be faced with serious labour problems, and will ask for man power which until now has not been employed in Ethiopia. This will undoubtedly render the training program more difficult.

25. Since a certain number of industrial projects will be finished after 1959, the number of employees in the factories from the industrial program of the Second Five Year Plan will increase to about 70,000, as when these projects are completed an additional 12,000 specialists and labourers of various skills will be necessary. This personnel will have to be secured progressively in 6 to 7 years beginning with 1955, which means that it will be necessary to begin training them on time. The overall need for high and medium skilled personnel is foreseen as follows:

| | |
|---|---|
| University Graduates | |
| Mechanical Engineers | 90 |
| Electrical Engineers | 70 |
| Chemical Engineers | 120 |
| Civil Engineers | 15 |
| Economists | 140 |
| Veterinarians | 15 |
| Physicians | 10 |
| Total: | 460 |
| Secondary School Graduates | |
| Technical | 800 |
| Commercial | 600 |
| Others | 400 |
| Total | 1,800 |
| Grand Total: | 2,260 |

Due to the shortage of trained personnel and to the length of university education, the employment program anticipates a much higher proportion of secondary school graduates than of the university ones. This is a temporary provision which has to be changed during the Third Five Year Plan to achieve better proportions within the labour force composition in favour of university and secondary school trained personnel.

26. The number of employees in the whole industry and individual branches over the Second Five Year Plan will increase in accordance with the erection of new projects, while the number of employees in the existing factories will depend not only on expansion, but upon the productivity of work also. As a consequence of the erection of those industrial branches where the technological process calls for a smaller participation of labour (chemical industry, steel industry and others), as well as those with modern equipment, the growth of employment will fall behind the increase of production. Due to these factors it will be necessary to employ in the future more and more higher qualified personnel, whether they be technical, economical or skilled workers.

27. In conformity with the significant growth of production and increases in employment, labour productivity is expected to rise, which is an expression of the higher efficiency and profitability of the new domestic industry. The relations of the gross value of production, employment and productivity is foreseen as changing as follows:

**Gross Value of Production, Employment and Productivity 1949-1959**

| | 1949 | 1954 | 1959 |
|---|---|---|---|
| Gross Value of Production in thousand Eth.$ | 72,600 | 116,350 | 369,575 |
| Total Employment | 18,700 | 27,600 | 57,900 |
| Gross Value of Production per 1 Employee in Eth.$ | 3,882 | 4,215 | 6,382 |

Increase in the gross value of production per employee is planned almost to double from 1949 to 1959. This will be the consequence of great improvements in all factors of production during the Second Five Year Plan. Emphasizing the productivity of labour as one of the main characteristics of industrial development coincides with the general line of economic development, and with the place of manufacturing industry as the most propulsive sector of the economy.

Development of Various Industries.

28. Food Industry. After the erection of several slaughterhouses, which will be located in cattle-raising regions, an annual processing of over 600,000 head of livestock has been forecast. The products of the new slaughterhouses (frozen and canned meat) are intended for export to foreign markets. It has been estimated that about 10,000 tons of fish products will be processed in the new plants erected at the Red Sea and the lakes. In addition to supplying domestic needs, considerable quantities of fish products will be exported. By processing oil seeds in the new plants, the existing production of edible oil will more than double (about 12,000 tons in 1959) and at the same time the quality should improve. The present production of sugar amounting to about 40,000 tons a year will increase to over 60,000 tons, and in addition, in the course of the Third Five Year Plan a new sugar factory will be erected. By building new factories and expanding the existing ones an increase in the production of flour, macaroni, egg products, milk products, canned fruits and vegetables, etc. has been foreseen. In order better to utilize the large quantities of domestic coffee, the construction of a new plant to produce powdered coffee (with a capacity of 3,000 tons) has been planned. This factory will produce 1,500 tons of powdered coffee for export in 1959.

29. Beverages. In the course of the Second Five Year Plan better utilization and increased production has been foreseen in almost all the factories in this industrial branch. On the basis of predicted

increased consumption, one more brewery will be erected, so that at the end of 1959 the total production of beer will be over 100,000 hectoliters. An increase in production has been foreseen for wines, liqueurs, alcohol, soft drinks, and tedj.

30. Tobacco Manufacturing. After completing and expanding the existing factories, an increase is anticipated in cigarette production from 360 to 500 million in 1959. In addition, in the 1959 - 1961 period the erection of a new cigarette factory is foreseen.

31. Textile Industry. After finishing the plants under construction and expanding the existing ones, the production of cotton fabrics will increase, according to estimates, from the present 21,5 to 74 million sq. meters. The plan has also forecast production of rayon fabrics in the new factory of 1,500 ton capacity. The production of cotton and synthetic fabrics will have to satisfy broadly the domestic needs. The increased production of cotton yarn is partly intended to supply the cottage industry, because its development is also anticipated. Parallel with this, the manufacture of final goods in the textile industry is being planned, such as knitted wear, hosiery and blankets. The erection of a new woollen-products factory is planned, which will, among other goods, produce about 270,000 blankets a year and reduce import. On the basis of domestic raw materials, the construction of a flax-product factory is foreseen with a capacity of 500 tons yearly, as well as the erection of an umbrella factory to produce 100,000 umbrellas yearly. The Plan estimates an increased production of sacks and ropes from 2.8 to 6 million pieces, including the production of a new factory of 2,000 tons a year. On the basis of processing musa, a fiber factory, with a capacity of 1,000 tons a year is to be built. Finally, in the textile industry the erection of a ready-made clothes factory is planned, intended to supply the needs of military and civilian consumption.

32. Leather and Shoe Industry. The present factories for the manufacture of leather and shoes, aided by reasonable Tariff protection, will be capable in 1959 of producing about 1,000 tons of leather and 650,000 pairs of leather shoes. The erection of new slaughterhouses will contribute to a considerable increase in the production of the leather and shoe industry, so that it has been planned to establish several new leather factories with a total capacity of 7,500 tons of leather, and new leather and shoe factories to produce 5 million pairs. It will be necessary to secure markets abroad for the produce of the leather and shoe industries. To meet the growing demand for shoes on the domestic market the erection of a canvas and rubber shoe factory has been planned whose production in 1959 should reach 1,300,000 pairs.

33. Wood Industry. Wood processing into timber, from the present 12,500 cu.m., is forecast to rise to 20,000 cu. m. in 1959. This will be attained by utilizing the present capacity of the industry and by constructing a new sawmill. The manufacture of wood into final goods is

foreseen by the production of 3,000 cu.m. of plywood in 1959, as well as by increased production of furniture and other final wood products. In addition to the existing furniture factories the construction of a new one has been planned.

34. Building-material and Nonmetal Industry. As the result of an intensive investment construction which has been forecast by the Second Five Year Plan, the building material industry will expand the existing capacity and erect new factories. Most important is the production of cement, and therefore the completion of the factory under construction in Addis Ababa, of a 70,000 ton capacity has been foreseen, as well as the erection of a new factory of 150,000 tons, whose production for the most part is intended for export. The production of the new factory for asbestos - cement articles will replace a large part of materials which have been imported in the past. In addition, the erection of new brick-yards has been planned with a total capacity of about 20 million bricks, and the new lime factories planned will produce about 5,000 tons of lime annually. The existing capacity of the ceramic industry will be expanded to meet the needs of the domestic market. From 1959 till 1962 a refractory material plant will be built to cover the needs of domestic metallurgy and other industrial branches, and during the same period the erection of an electro-porcelain factory has been planned in order to create conditions for a faster electrification of the country.

35. Chemical Industry. Continuous increase of imports and the many existing basic raw materials suggest a very intensive development of chemical industry during the Second Five Year Plan period. Large quantities of wood justify the production of pulp for the new paper factory with an 8,500 ton capacity, and a viscose factory with a capacity of 12,000 tons. To supply the needs of these factories it has been planned to erect a caustic soda factory (12,000 tons), a carbon bisulfide factory (6,000 tons) and to produce sulphuric acid (20,000 tons). The products of these factories will also serve the needs of other chemical industry plants. One of the largest chemical industry projects will be the oil refinery, which is to refine 500,000 tons of crude oil annually, and whose capacity may later be doubled, especially if domestic production of crude oil is achieved. There is a sufficient supply of domestic raw materials to justify the erection of a soap factory of a 5,000 tons capacity. Likewise, the existing domestic raw materials derrived from certain varieties of trees, as well as the increased needs of the leather industry, are a basis for the construction of two tanning material factories with a total capacity of 2,000 tons yearly. Deposits of quartz sandstone are a basis for the expansion of the existing glass factories, as well as for the erection of a new factory to manufacture sheet glass, with a capacity of 1 million sq.m. In order to satisfy the basic needs of the domestic market it has been planned to build a pharmaceutical factory, a plastic product factory, and a tyre plant. By the end of the five-year period it has been planned to start construction on several new projects,

such as a fertilizer plant, PVC plant, paint factory, one more pharmaceutical and another soap factory, as well as to expand the oil refinery for lubricating oil production.

36. Printing and Publishing. The domestic needs in this industrial branch will be met by the expansion of the existing plants, and in addition it has been planned to build a printing and publishing plant of a larger capacity than the existing one.

37. Steel, Metal and Electric Industry. By securing a domestic supply of iron ore it will be possible by the end of the five-year period to build a steel plant of the forecast capacity of about 80,000 tons. On the basis of this production, and the completed Iron Works at Akaki, it will be possible to approach a more extensive construction of a metal and electric industry, which should satisfy the basic needs of the country with their products. It has been planned to erect an agricultural machine and tool factory, a metal processing plant, a metal construction plant and a household appliance plant. For the initial production of tractors, the erection of a tractor assembly plant has been foreseen, and for ship repair and reconstruction in the domestic ports a ship repairing workshop will be built. To meet the needs of domestic consumption an aluminiumware factory will be erected, which should meet the needs for utensils and other goods for the household. In the electric industry sector a car battery factory, an electric-installations factory, as well as an electric bulb factory will be built. In order further to expand the metal and electric industry it is planned in 1959 to start the construction of a metal processing plant, a shipyard, an electric motor factory and an electric wire and cable factory.

New Projects.

38. Within the range of the total investment amount it has been planned to expend Eth.$353.4 million for new projects, while the remaining Eth.$72.5 million are assigned for finishing the projects under construction, and for the reconstruction of the existing factories. Out of the 121 projects, 18 are being completed or reconstructed, and 103 new projects are planned. The arrangement of all the planned industrial projects - those being reconstructed and finished, as well as the new projects - according to industrial branches is shown in the following table:

## Number of Industrial Projects to be Constructed Over the Second Five Year Plan

| Branch of Industry | Total | Out of that: Completed or reconstructed | Out of that: New projects. |
|---|---|---|---|
| Food Industry | 29 | 3 | 26 |
| Beverages | 3 | 1 | 2 |
| Tobacco Manufacturing | 2 | 1 | 1 |
| Textile Industry | 15 | 6 | 9 |
| Leather & Shoe Industry | 9 | 1 | 8 |
| Wood Industry | 3 | - | 3 |
| Building & Nonmetal Industry | 16 | 3 | 13 |
| Printing & Publishing | 2 | 1 | 1 |
| Chemical Industry | 22 | 1 | 21 |
| Steel, Metal & Electric Industry | 16 | 1 | 15 |
| Others | 4 | - | 4 |
| Total: | 121 | 18 | 103 |

39. The planned construction of the total of 121 projects with an investment expenditure of Eth.$425.9 million, refers to those projects which will be completed from 1955 to 1959, as well as those which will be finished after 1959. Out of the foreseen 121 projects in the course of the Second Five Year Plan, 94 will be finished, with an investment value of Eth.$344 million. After 1959, 27 projects will be finished and Eth.$ 81.9 million will be expended for their completion.

## Projects to be Put into Operation 1955 to 1959

| Year | Number of projects |
|---|---|
| 1955 | 3 |
| 1956 | 19 |
| 1957 | 15 |
| 1958 | 24 |
| 1959 | 33 |
| Total: | 94 |

40. The new projects foreseen by the Second Five Year Plan ensure a much wider assortment of industrial products. When these projects are completed, new industrial articles will be manufactured, which were not produced before, such as powdered coffee, fish products, refined edible oil and margarine, woollen fabrics, rayon fabrics, flax products, umbrellas, canvas and rubber shoes, cement - asbestos products, paper, caustic soda, sulphuric acid, tannery material, pharmaceutical products, plastic products, tyres, car batteries, sheet glass and various sorts of crude oil derivates. In addition, agricultural machines and tools will be produced, as well as metal constructions, various metal articles for the household, electrical installation materials and bulbs.

41. In selecting the new projects for the Second Five Year Plan, it has been kept in view that the newly developed industry should not only satisfy as much as possible the needs of the domestic market, but also strive to ensure a considerable increase in exports. Thus the new projects should increase exportation of frozen and canned meat, refined edible oil, fish products, powdered coffee, leather shoes, cement, bottles, and other industrial products. When the projects are erected, the export capability of industry will be increased to such an extent that exports in 1959 will increase almost eightfold in comparison with 1954.

## Measures.

42. In order to implement the extensive industrial program for the Second Five Year Plan, it is necessary to undertake energetic measures to realize all the stages of construction on time. Besides creating favfourable conditions for economic development in general, and encouraging industrial activity, the Government Agencies concerned will particularly (i) carry on studies and preparatory work for the construction of the key projects of the industrial program, (ii) secure through public loans and from other sources sufficient financial means to provide equipment, as well as for construction and experts, (iii) undertake appropriate measures with the aim of attracting foreign investors, and encouraging domestic savers to invest in industry, (iv) grant facilities to the new industry in respect of credit and taxes. The Government will also establish new public or semi-public business organizations which will be responsible for implementing the large-scale specific projects.

43. It is to be expected that the Chamber of Commerce will direct its activity in a much larger measure toward industrial development, by attracting domestic and foreign investors to invest in those branches of industry which speed up economic development. The existing industrial enterprises are recommended to expand their capacities and production as conceived by the industrial program, and reinvest in those branches which are complementary with their present activity.

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## Chapter 12

# BUILDING AND CONSTRUCTION

1. In the First Five Year Plan building and construction were not considered a separate branch of economic activity. Due to its increasing importance, the Second Five Year Plan provided a separate place for Building and Construction, including it into the Plan under a special heading.

2. The implementation of the investment plan largely depends on new buildings and constructions for industrial, agricultural and other purposes which are to be erected during a certain period of planning. The share of building and construction amounts to 30 to 40 per cent of the total investment. To reduce the development expenditure and to achieve a higher efficiency of various programs, economy in costs of building and construction should be the guiding principle in this activity. It has to be followed in all the stages of construction, in designing, executing the works, by use of the most appropriate building materials, by an adequate control and supervision, etc. This points to the importance of organization both at the level of executive enterprises, and that of the Government Agencies.

## Building and Construction During the First Five Year Plan.

3. According to the available statistical data the value of building works in urban housing reached the amount of Eth.$ 24 million in 1954. On the other hand the value of building and renovation of the rural houses, estimated by the agricultural experts, is about Eth.$ 20 million per annum. This, of course is mainly building activity in kind performed by the farmers themselves. Civil engineering for various branches of transportation, power, and industry has been very intensive in the last five years. About Eth.$54 million on an average have been spent per annum during this period for the construction of highways, and for Assab Port and airports. As far as industry, power and mining are concerned approximately Eth.$ 8 million per annum have been expended for the construction of industrial and other structures. Finally, in various social services (education, public health, etc.) about Eth.$ 6 million have been allocated yearly for buildings. By summarizing all these components of building and construction activity an amount of approx. Eth.$ 112 million has been estimated as the value of the building works in the last year of the First Five Year Plan. Out of this total, about Eth.$ 15 million has been estimated to be the value of building works in kind. The following table shows the development of the basic construction activities expressed in terms of gross value of production:

## Gross Value of Production in 1949 and 1954 (E.C.)

Thousand Eth.$

| Branches of Construction | 1949 | 1954 | Index Number 1949 = 100 |
|---|---|---|---|
| Buildings | 500 | 1.500 | 300 |
| Housing | 11.000 | 23.000 | 208 |
| Water Resources | 2.000 | 4.500 | 225 |
| Civil Engineering | 20.000 | 56.400 | 282 |
| Farm Construction | 16.200 | 20.300 | 126 |
| Other Construction | 3.200 | 6.100 | 191 |
| Construction - Total | 52.900 | 111.800 | 212 |

Owing to the lack of necessary statistical data the figures shown in the table are of a rather tentative nature, but they nevertheless display the very intensive building activity which was carried out during the First Plan.

## Building and Construction in the Second Five Year Plan.

6. **Production Targets.-** Regarding the volume and the structure of investment foreseen in the Second Five Year Plan, a fairly high rate of growth of building activity of about 10.4 per cent is to be expected in the following period. The planned increase of production in various branches of construction may be seen from the following table:

## Gross Value of Production in 1954 and 1959 (E.C.)

Thousand Eth.$

| Branches of Construction | 1954 | 1959 | Index Number 1954 = 100 |
|---|---|---|---|
| Buildings | 1.500 | 15.000 | 1.000 |
| Housing | 23.000 | 30.000 | 130 |
| Water Resources | 4.500 | 7.000 | 155 |
| Civil Engineering | 56.400 | 93.000 | 165 |
| Farm Construction | 20.300 | 30.000 | 131 |
| Other Construction | 6.100 | 8.000 | 131 |
| Construction - Total | 111.800 | 183.000 | 164 |

As may be noticed, an important increase of activity in building has been planned in the forthcoming period, which is dictated by very large investment programs in productive activities (manufacturing industry, transport and communications) and in social and economic services (housing and public buildings for education, public health, etc.).The construction of buildings in 1954 E.C. was exceptionally low, which explains the high increase in the planned gross value of production in 1959. The next largest increase is envisaged in civil engineering works due to the continuation of intensive road construction, and the completion of the main airports which have to be undertaken during the Second Plan. The increase in the gross value of housing construction is smaller than realized in the First Plan, but due to the emphasis on low-cost housing projects, the total number of dwellings to be built in the Second Plan will be even larger than in the previous five Years. Farm and other construction would be at or about the same level as housing.

7. The improvement of the organization of the building and construction firms, as well as the Ethiopianization of building activity in the country are important tasks which have to be carried out. With this in view, two Ethiopian construction enterprises have to be established, one for roads and other civil engineering works, and the other for housing and other buildings. Domestic enterprises should play an important role on the building market of Ethiopia, and help to reduce building and construction costs and improve the quality of the work.

8. In order to secure the implementation of the targets during the Second Five Year Plan, Eth.$ 9,0 million is assigned to equip the new Ethiopian building and construction enterprises.

9. Scientific Research.- Scientific research is actually the base and beginning of every technical and other progress, and there is substantial need for an organization of scientific and technical research in building. At present a modest but well organized Materials and Soils Testing Section exists within the Building College, but its main task is to serve educational purposes. There is need to establish a Building Research Station at the Ministry of Public Works which will deal with the promotion of building activity in Ethiopia. The Station should, in particular, carry out surveys and research concerning:-

- the availability of raw materials for the building materials industry;
- the promotion of building techniques;
- the preparation of rules, regulations, technical standards, technical prescriptions, recommendations and instructions concerning building and civil engineering activities;
- the dissemination of technical knowledge by booklets, leaflets, lectures, films, seminars, special post-graduate courses, etc.
- the testing of materials and constructions, as well as the material and raw materials for preparation and building.

10. Building Materials.- In the coming period construction will require a well co-ordinated development of industries that produce building materials. Construction firms should influence the production programs of the building material producers and standards of industrial products which are used in building activities should be introduced. Increased collaboration and extensive inspection by responsible authorities, justifies also the setting up of the proposed Building Research Station. The existing industrial undertakings which produce building materials do not satisfy the present needs, and many materials are imported (cement, bricks, timber, tar and bitumen, steel, glass, etc.). The future development of Ethiopian industry will turn toward a gradual decrease in imported building materials, with the aim of eventually eliminating the unnecessary import of many of them.

11. Low Cost Housing.- Special attention is to be paid to the technical problems of low-cost housing, namely to a well elaborated scheme of aided self help construction. The Government, through the Research Station, should extend its assistance in various forms, such as designs for modest standardized housing projects based on the use of local materials, instructions concerning required technical standards, supply of provincial instructors to assist the people in building, etc. The Research Station should also fully extend its technical assistance to solving the problems of some basic communal facilities, for instance, roads, water supply, sewerage, electricity, etc.

12 . Organizational Measures.- Although building activity in the country has considerably increased ( at present it makes up about 35 per cent of the total investments), a well organized building sector in Ethiopia is still lacking. The technical department of the Ministry of Public Works for Public Buildings has to be further developed in order to be able to meet the ever growing needs in this field, particularly concerning designing and supervision. There is a great need to rebuild the organization of the Ministry of Public Works and Communications in order to enable it efficiently to carry out the responsible tasks. To this end, the following requirements appear particularly important:

(1) To enable the Ministry to concentrate fully on the growing tasks concerning the building activity in the country, it is necessary to exclude from the Ministry other activities, such as transport and communication, not related directly to the fields it has exclusively to deal with.

(2) Due to its importance, as well as to the need for making it more operational, water resources activity should be organized as a separate agency under the auspices of the Ministry.

(3) The Technical Department (Public Buildings) will have to be enlarged and entrusted with elaborate projects and designs, as well as the control and supervision of building works executed throughout the country. Therefore, as a network of outposts of the Ministry of Public Works, Provincial Technical Sections will have to be created.

(4) The entire field of physical planning, town planning as well as rural planning, should be concentrated in the Ministry of Public Works, because this activity is the basis for every building and construction.

(5) the registration of designing and consulting firms at the Ministry of Commerce and Industry should be achieved by the provision that the Ministry of Public Works shall be authorized to issue licences, since the activity of those firms is for the most part connected with construction.

13. It is highly desirable to extend the influence, activity, and responsibility of the Ministry of Public Works all over the country. At present the Ministry of Public Works' Technical Department is concentrated in the capital city, and has no branches in the Provinces which could handle the local problems and needs concerning building activity. Exceptionally inspectors supervise the construction of several important public buildings outside Addis Ababa, but they cannot be considered a permanent field staff. Regional or Provincial Public Building Sections, subordinated to the Ministry, will have to be created, and they have to remain independent to a certain degree, and be authorized to deal with and solve the local problems concerning public buildings such as supervision, control, and later even designing or execution of some works. Provincial sections could also be charged with some administrative tasks, such as issuing permits for buildings, taking care that the regional and town planning is respected, etc.

14. Contractors.- There is a need to train young Ethiopian engineers, architects and technicians in order to qualify them to organise and expand the Ethiopian operative organizations for design and construction. As there is already a good start in the existing Engineering College as well as in the Ethio-Swedish Building College and Building Center, to achieve this aim it will be necessary:

- to give more support and assistance to the Ethio-Swedish Building Center which makes efforts to train the young graduates of the Building College to become future building contractors, as well as to train skilled workmen;
- to send young graduates from both the Building and Engineering Colleges to gain practical knowledge in various designing and building organizations, in the country as well as abroad. Scholarships or fellowships from the United Nations Technical Assistance Administration, as well as those granted by Ethiopian or friendly foreign Governments, may be of much help in this respect.

15. Designing.- At present most of the designing work is done by foreign consulting firms, while a smaller and less important part of the designing is carried out by the Technical Department of the Ministry of Public Works. The charges of the consulting firms are considerable, and the greatest part is remitted abroad. It is important, therefore, that the Ministry's Technical Department (Design Section) be developed and in all respects properly equipped and staffed with well trained personnel, so as to be able to undertake the tasks of working out the designs for the increasing

number of public buildings. The Design Section should be gradually extended to become an architectural and civil engineering, designing, and consulting firm, or even a group of several consulting firms, specialized in different fields of designing activity.

16. Legislation.- For the time being there is an almost complete lack of technical codes, rules, regulations and similar technical legislation. One of the main and most urgent tasks of the Ministry of Public Works is to issue, or to prepare and submit to the higher authorities, drafts of technical codes, rules, regulations, instructions and recommendations, concerning:

(1) the preparatory phase of a building, and the investment process: elaboration of a techno-economic documentation; its revision and approval; completeness of designs and their co-ordination with the program requirements; instructions for the designers; definition of a complete design, with all the necessary drawings and documents, etc.;

(2) designing and building; among the many things to be regulated in these fields only the main ones will be listed:

(a) regulations concerning the authorization to make designs i.e., the conditions to be fulfilled to be a chartered Architect, Engineer Technician, Geometer; conditions to establish and operate a consulting firm;

(b) regulations concerning obligatory issuing of licences to Consulting and Designing firms by the Ministry of Public Works;

(c) regulate the limits of fees for services rendered by the Designing and Consulting Firms;

(d) technical rules, recommendations, and instructions for calculation and construction: permissible loads, permissible stresses, safety factors, soil testing materials, constructions, the required minimum of the quality of building materials and constructions;

(e) regulations concerning the compulsory content of technical elaboration (the project, design, tender - documents, details, etc.);

(f) ordinance on the procedure and conditions for obtaining permits for buildings, concerning the town planning aspects, control of compliance with the current Annual Plan of the Economic Development, approval that the design is economically and technically accurate and recommendable;

(g) ordinance on the revision and approval of technical documentation of Public Buildings;

(h) establishment of a Commission for Revision and Approval of Investment Projects as well as a Commission for Revision and Approval of Designs.

(i) legislation concerning the following services; town and rural planning and the final approval of an investment project to be executed according to the current annual plan. Control and Supervision are to be performed by the responsible Government and Municipality Agencies, according to the legislation stated above.

## Chapter 13

# HANDICRAFT AND COTTAGE INDUSTRY

### Recent Development

1. The basic tasks which were set before handicrafts and cottage industry in the First Five Year Plan were, in main, implemented, and handicrafts and cottage industry have gained a definite place in the economic development of the country. A steady development of the economy by itself indused the development of these branches, and the fact that the industrial products in the past period could not penetrate into all parts of the country, left a large part of it to be supplied exclusively by handicrafts and the cottage industry.

2. For this reason the handicrafts and cottage industry constituted, during the First Five Year Plan, a relatively important production sector with the gross value of production reaching an amount of Eth.$ 88 million in 1954. Such a big output is also the result of the large number of persons employed, estimated to be about 186,000 in 1954. The significance of handicrafts and cottage industry was demonstrated by their ability to supply many needs on the domestic market which industry did not cover, in particular certain textile products, footwear, agricultural tools, utensils and other articles.

3. The development of handicrafts and cottage industry during the First Five Year Plan was very intensive in the cities and larger settlements, due to a faster growth of income, as well as to an enlarged area of operation over which handicrafts and cottage industry had to extend. The expansion was especially apparent in certain kinds of handicrafts, such as building handicrafts (masons, carpenters, locksmiths, and in large towns all kinds of installers, tinsmiths, painters and others) and in some servicing handicrafts, which develope faster in cities (tailors, shoemakers, bakers, barbers and others). The development of handicrafts and cottage industry in the smaller towns inclined towards crafts, such as weavers, blacksmiths, well-diggers, barbers and others.

4. Certain organizational measures and processes in respect of the advancement of handicrafts and training of personnel were partially undertaken in several larger towns such as Addis Ababa, Asmara, Dessie, Dire Dawa and others. These measures were intended mainly to train personnel for certain kinds of crafts, such as carpet making, weaving, coppersmith crafts, woodworking, mechanics and others, and in addition to encourage the development of the handicrafts necessary in other towns.

### Production Targets

5. It is planned in the Second Five Year Plan to continue and speed up the development of handicrafts and cottage industry, so that ..

they will be able to carry out the enlarged tasks of the developing economy, Handicrafts and cottage industry will, in the first place, have to meet the needs of the domestic market by offering standard products of craftmanship, as well as by extending handicraft services. In addition, this economic branch will, by faster development, have to train a larger number of qualified and semiqualified workers, who will gradually meet the growing needs of industry.

6. Favorable conditions for the development of handicrafts and cottage industry in the forthcoming period will be created by the more intensive development of those industrial branches which also provide raw materials for handicrafts. The textile industry will supply more cotton yarn, coarse fibers, and all kinds of fabrics for the manufacture of clothes, shirts and underwear, the leather industry will insure larger quantities and a wider assortment of various kinds of leather for footwear and leather goods, and the steel industry, by producing sheet iron, section iron, bands and wire, will also be able to supply the needs of many handicrafts. The industrial production of certain nonmetal raw materials (e.g. clay, cement and asbestos)will also provide necessary processing supplies to handicrafts.

7. The rapid development of towns and the intensive building activity which are forecast by the Second Five Year Plan, set new and extensive tasks before handicrafts. An intensive increase is therefore anticipated in those craftsmen who are indispensable for the carrying on of the extensive building activity, such as masons, carpenters, installers, painters, tinsmiths, ceramic tile layers, locksmiths, etc. In addition to the increase in the number of craftsmen, a need will also arise in the towns for combined service shops for house maintenance, repair of installations and other combined handicraft services.

8. A higher living standard and the expansion of towns and settlements will not only call for a further development of the existing handicraft services, but also for new ones, which will be needed to meet the demand in the coming period (services provided by tailors, shoemakers, barbers, butchers, bakers etc.)

9. It is estimated that the value of handicraft and cottage industry production will reach Eth.$ 107 million in 1959, an increase of 21.5 per cent over the value in 1954. This growth of production value in handicrafts and cottage industry will be realized not only by an increase in the number of employed persons, but also by improved equipment, appliances and tools, as well as by a wider assortment and larger quantities of raw materials, which will be supplied by the domestic industry.

## Investment and Employment

10. The Second Five Year Plan provides for an investment of Eth.$ 5 million for the development and better equipment of handicrafts

and cottage industry. Out of this, Eth.$ 4.5 million will be spent for the purchase of equipment, and the remainder will be invested in construction works. The amount foreseen to be invested in equipment will be expended on supplying handicrafts and cottage industry with better and more up-to-date equipment, implements and necessary tools. This will create favorable general conditions for work and development in handicrafts, by lowering the costs and improving the quality of the handicraft products and services.

11. The envisaged expansion of the volume and variety of handicraft and cottage industry production, as well as of investment requirements, will call for an increase in the number of persons employed. It is planned that in 1959 the number of persons employed will reach 220,000 as against 186,000 in 1954. It is of utmost importance to provide handicrafts and cottage industry with more qualified personnel, and this has to be achieved by educating the craftsmen and training them technically in handicraft schools, schools for apprentices, various courses, and by other methods. In order to ensure the planned pace and line of development, it will be necessary, in the course of the next few years, to introduce further measures, such as the obligatory registration of the craftsmen and their apprentices, and laying down standard qualifications and technical skill required for particular handicrafts.

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## Chapter 14

## TRANSPORT AND COMMUNICATIONS

### Recent Development

1. In the First Five Year Plan particular attention was paid to the development of transport and communications with the aim of opening up promising economic regions and enabling them to reach the local and foreign markets, and also of linking different provincial centers with the capital of the country. Taking into consideration the needs and the possibilities for the development of individual branches of transport and communications, the First Plan had emphasized such targets as the construction and maintenance of all-weather roads, the import of motor vehicles, the development of domestic and international air transport and the enlargement and equipping of the Assab Port. The development of telecommunications has been intensive during the period. The fact that Eth.$ 240 millions, or 45 per cent of total monetary investment outlays in the years 1949-1954, were appropriated for the development of transport and communications indicates the priority given to this economic sector under the First Five Year Plan.

1.p. 2/4

2. The development of the various branches of transport and communications can be shown by the increase in the gross value of production over the last five years:

### Gross Value of Production in 1949 and 1954

in thousand Eth.$

| Branches of transport and communications | 1949 | 1954 | Index number 1949=100 |
|---|---|---|---|
| Railways | 12.400 | 14.300 | 115 |
| Road Transport | 82.300 | 120.000 | 146 |
| Air Transport | 13.400 | 27.900 | 207 |
| Water Transport | 9.000 | 10.400 | 116 |
| City Traffic | 2.500 | 10.100 | 405 |
| Transport Total | 119.600 | 182.700 | 154 |
| Posts | 1.500 | 2.000 | 133 |
| Telecommunications | 4.300 | 6.600 | 154 |
| Communications Total | 5.800 | 8.600 | 148 |
| Grand Total - Transport & Communicat. | 125.400 | 191.300 | 153 |

As shown, city traffic was the most progressive and quadrupled in the last five years; during the same period air transport more than doubled, and road transport increased by 46 per cent, but the development of railways and water transport (port traffic) was much slower. Telecommunications have shown a very significant progress. In Postal Traffic the number of letters is increasing greatly but the number of parcels is on the decline.

3. The activity of various branches of transport and communications was undoubtedly influenced by the way their work was organized, but was basically determined by the investments that were made in the course of the First Five Year Plan.

### Investment in Transport and Communications

In Thousand Eth.

| Branches of Transport and Communications | 1949 Plan | 1954 Fulfilled | Index of Fulfillment (Plan = 100) |
|---|---|---|---|
| Railways | 9 000 | 7 000 | 77.8 |
| Road Transport | 75 000 | 127 800 | 170.0 |
| Air Transport | 47 500 | 47 600 | 100.5 |
| Water Transport | 28 500 | 26 900 | 94.5 |
| City Traffic | 10 000 | 8 000 | 80.0 |
| Transport Total | 170 000 | 217 300 | 128.0 |
| Telecommunications | 10 000 | 10 000 | 100.0 |
| Communications Total | 10 000 | 10 000 | 100.0 |
| GRAND TOTAL Transport and Communications | 180 000* | 227 300 | 126.0 |

4. Taken as a whole, transport and communications have made remarkable progress in the 1949 - 1954 period, although all the targets se by the First Five Year Plan were not achieved. The development of transpo and communications as a whole in the period has actually been of an unstea and haphazard character. Large investments in the construction and maintenance of the road network, which surpassed the originally planned investments by 70 per cent, and the intensive import of motor vehicles have resulted in a considerable increase of road transport. On the contrary, the planned investments in railways were not realized and, consequently, in the railway traffic no visible progress was achieved. The construction of Assab Port is one of the most important projects realized in the First Fiv Year Plan and provides the opportunity for the development of Ethiopian shipping and port traffic.

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* In fact, Eth.$ 240.0 million had been planned, but this figure included about Eth.$ 60.0 million for the maintenance of all weather-roads, which amount should not be considered as an investment.

## Second Five Year Plan Targets.

5. General Outline.- A further development of transport and communications at an average of 7.1 per cent annually is envisaged in this Plan. This rate of growth of transport and communications is about twice the rate of development of the whole economy which has been estimated to be at an average of 4 per cent annually. This increase in the transport and communications services is planned in accordance with the requirements arising from the anticipated expansion of the industrial production, marketable agriculture surplusses, and the volume of trade.

(1) A considerably larger demand for transport facilities makes it necessary during the Second Five Year Plan to pay due attention to a better co-ordination in the development of the various branches of passenger and freight transport, with the purpose of increasing the efficiency in utilizing the fixed assets in transport and communications. In this sense the principle of linking road transport to shipping and utilizing the existing ports, as well as of linking road transport to the lake transport, and of developing river transport in the southwestern part of the country, has to be underlined in the development of the network.

The emphasis in the expansion of the existing road network during the Second Five Year Plan should therefore be laid on those roads which not only have a dominant but also a co-ordinating role. It will be necessary, even in the Second Five Year Plan, to start intensive surveys and to design new railway tracks which will in the future have to play a much more significant role. It will also be necessary to follow closely the trend of technical progress in railway transport, since there are signs that significant innovations are likely in this branch of transport.

(2) In the course of the Second Five Year Plan it will be necessary to continue road construction so that new regions can be opened for economic development during the subsequent plans. It will also be necessary to intensify the construction of new roads, particularly toward the east, from Addis Ababa to Awash Station and to Assab (via Tendaho), and in the southwesterly direction.

(3) Parallel with the improvement of the existing railways it will be necessary to begin larger-scale studies concerning the construction of new railway lines which should, in a long-term program, make possible the transportation of the considerably greater quantities of freight arising from agriculture, mining, and industrial production.

(4) It will be necessary to finish the construction of airports already started and complete the purchase of jet planes according to arrangements made. Special care should be taken to solve problems with regard to the exploitation of sea ports, and in particular of Assab Port.

(5) The development targets for various branches which will have to meet the requirements of the economy during the Second Five Year Plan are shown by the increase of the gross value of production:

## Gross Value of Production in 1954 and 1959

in thousand Eth.$

| Branches of Transport and Communications | 1954 | 1959 | Index Number 1954 = 100 |
|---|---|---|---|
| Railways | 14 300 | 17 000 | 119 |
| Road Transport | 120 000 | 170 000 | 142 |
| Air Transport | 27 900 | 41 300 | 148 |
| Water Transport | 10 400 | 15 000 | 144 |
| City Traffic | 10 100 | 13 000 | 130 |
| Transport Total | 182 700 | 256 100 | 140 |
| Posts | 2 000 | 3 200 | 160 |
| Telecommunications | 6 600 | 9 600 | 146 |
| Communications - Total | 8 600 | 12 800 | 148 |
| Grand Total - Transport & Communications | 191 300 | 268 900 | 141 |

### Investment.-

6. General features of the investment policy.- Investment in transport and communications during the Second Five Year Plan will have to secure a planned development of the various branches and of this eco mic section as a whole. The total amount of investment planned for 1955-1959, in comparison with the previous 1950-1954 period, as well as their breakdown into the main branches is given in the following table:

### Investments in the Second Five Year Plan

in thousand Eth.$

| Branches of Transport & communication | 1950-1954 (implemented) | As per cent of total | 1955-59 (planned) | As per cent Total | Index No. 1955-1959 / 1950-1954 |
|---|---|---|---|---|---|
| Railways | 7 000 1) | 3.1 | 10 000 | 3.2 | 143 |
| Road Transport | 127 800 2) | 56.2 | 155 600 | 49 2 | 122 |
| Water Transport | 26 900 | 11.8 | 24 163 | 7.6 | 90 |
| Air Transport | 47 600 | 21.0 | 89 153 | 28.2 | 187 |
| City Traffic | 8 000 | 3.5 | 6 000 | 1.9 | 75 |
| Transport Total | 217 300 | 95.6 | 284 916 | 90.1 | 131 |
| Posts | - | - | 5 000 | 1.6 | - |
| Telecommunications | 10 000 | 4.4 | 26 500 | 8.3 | 265 |
| Communicat. Total | 10 000 | 4.4 | 31 500 | 9.9 | 315 |
| Transport & Communications - Grand Total | 227 300 | 100.0 | 316 416 | 100.0 | 139 |

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1. Road maintenance of about Eth.$ 60.0 million excluded; but the purch of motor vehicles for Eth.$37.6 million is included.
2. Assab Port construction costs of Eth.$26.1 million included.

7. The total investment are estimated at Eth.$ 316.4 million, 39 per cent more that the investment made in the First Five Year Plan. The investments in transport should increase by 31 per cent, and in communications by 215 per cent, so that the share of communications in the total investment for transport and communications together will increase from 4.4 per cent in the years 1949-1954 to almost 10 per cent in the next five-year period. Such a high increase of investments in communications is planned with regard to the forthcoming reorganization of the posts, i.e., their transfer from budgetary financing to self-financing, as well as because, both on the domestic and international fields there is a demand for a faster development of telecommunications.

8. The particularly high increase of investments envisaged in air transport is necessary to carry out the program of introducing jet air transport into Ethiopian Airlines.

9. In water transport provisions are made for Eth.$ 24.2 million of investment, which is 10 per cent less than the outlay made in the previous five years. However, an important change in the structure or investments will have to be brought about, since in the First Five Year Plan, out of Eth.$ 26.9 million investment in water transport Eth.$ 26.1 million went for the construction of Assab Port. In the Second Five Year Plan comparatively high investments in this branch of transport are foreseen, but this time the bulk of investments is assigned to the development of an Ethiopian sea-shipping company which will directly contribute to the growth of water transport.

10. Road transport, as the most developed branch of transport in Ethiopia, will be allocated about 50 per cent of the total investment in transport and communications under the Second Five Year Plan. Compared with the First Five Year Plan investment in road transport shows an increase of 22 per cent.

11. Investment in railways has to provide the maintenance of the existing railway tracks, while a considerable part of investment (about 30 per cent) will be spent on survey and designing of the further development of the railway network in Ethiopia, to meet the needs of the planned development of the Ethiopian economy.

12. Investment in the city traffic of Addis Ababa is smaller than in the First Five Year Plan, due to the fact that the main streets and squares have already been built in the previous period so that such high investments will not be necessary for this purpose. Here, also, a change in the structure of investment outlays takes place, emphasizing projects dealing with physical city planning; modern development of city traffic will contribute to the harmonized development of city traffic in Addis Ababa.

13. Changes in the technical structure of investments are characteristic of the investment policy in the Second Five Year Plan:

In Eth.$ millio

| Technical Structure | 1949-1954 implemented | As per cent of total | 1955-1959 planned | As per cent of total | Index No. $\frac{1955-1959}{1950-1954}$ |
|---|---|---|---|---|---|
| Studies & Prospecting | 8.0 | 3.5 | 18.0 | 5.8 | 225 |
| Land | 5.0 | 2.2 | 12.3 | 3.9 | 247 |
| Building | 123.2 | 54.2 | 127.8 | 40.3 | 104 |
| Equipment | 49.1 | 21.6 | 123.7 | 39.0 | 252 |
| Motor Vehicles | 40.0 | 17.6 | 20.0 | 6.3 | 50 |
| Others | 2.0 | 0.9 | 14.7 | 4.7 | 735 |
| Total | 227.3 | 100.0 | 316.4 | 100.0 | 139 |

Priority in the investment policy is given to the development of the more productive branches of transport, such as air transport, shipping, and road transport, by promoting the greatest increase of investment for equipment (jets, cargo ships, tankers, PTT equipment), and for land transport (expansion of the road network, airports etc.). The existing stock of motor vehicles does not require as intensive an investment as in the previous period. Studies and prospecting are also given emphasis in the Second Plan, since they are of the utmost importance in laying a foundation for a longer-term policy in the development of transport and communications in Ethiopia.

14. The bulk of the investment outlay will have to be concentrated in the course of the first two years; it is estimated that out of the total investment planned for the next five years, 38 per cent will have to be effectuated in the first year, and some three fifths in the first two years of the Second Plan.

Such concentration of investment is caused mainly by the completion of the Jet Program in 1955 and 1965, and by the completion of certain roads under the Second Highway Program. In the subsequent years the intensity of investment gradually decreases from 20.8 per cent in 195 to 11.6 per cent in 1959.

15. The relation between domestic and foreign sources is estimated at 43: 57 which is approximately the same as in the First Five Year Plan. It is important to note that the budgetary amount is estimated at only Eth.$ 53.4 million, or about 17 per cent of the total investment, while in the First Five Year Plan, the budget share was Eth.$ 84.5 million, or 35.3 per cent of the total investment. The Second Five Year Plan has stressed to a much greater extent Bank Loans and independent funds as sources for financing the program of investment. These two sources, together with the investments in kind, amount to Eth.$ 70.2 million, or 22.3 per cent of the total investment, compared with Eth.$ 19.0 million or only 7.9 per cent in the First Five Year Plan, and this change should be considered to be a very positive trend. This trend in financing is particularly noticeable in the road transport plan for the construction of main and feeder roads and the purchase of motor vehicles . Furthermore, after the reorganization of posts is carried out, an intensive self-financing of investments in communications is to be expected. Financing from foreign sources is needed for the construction of certain roads and for the Jet Program.

16. Road Transport.- The total road transport in 1953 amounted to about 593,000 vehicle kilometers per day. This traffic was carried on a road network of 4,738 kms of all-weather roads, with a total number of operating motor vehicles amounting to approximately 16,000. These were the basic facts from which planning of the development of road transport in the Second Five Year Plan started.

17. Construction and maintenance of the road network should continue to develop in order to satisfy the fast growing needs of the economy. In addition to the completion of about 490 km of roads under construction according to the Second Highway Program, the construction of about 1300 kms of new main roads and about 1,000 kms of feeder roads is planned.

Roads to be constructed in the Second Five Year Plan

| Road Project | Length in kms | Estimated costs in Eth.$ Million |
|---|---|---|
| 1. Completion of road construction remaining from the Second Highway Program | 492.1 | 17.7 |
| 2. Road construction out of the AID Loan | | |
| - Agaro - Bedelle | 101 | 13.2 |
| - Bedelle - Gore (6 bridges only) | - | 7.6 |
| - Lekempti - Ghimbi | 110 | 12.7 |
| 3. Road construction to link the Harrar Road network as well as to cross-cut the Awash Valley by a road connection toward Assab Port (via Tendaho) | | |

| Road Projects | Length in kms | Estimated costs in Eth.$ million |
|---|---|---|
| - Nazareth - Awash St. - Miesso | 208 | 7.6 |
| - Awash - Gawane - Tendaho (437 km) | 80 | 6.8 |
| 4. To join the part of road network region of the country and around the Tana Lake with the central Junction Dessie-Combolcia and further with Assab Port, as well as for certain strategic reasons. | | |
| - Addis Zemen - Dessie (377 km) | 147 | 5.2 |
| 5. To open the richest coffee productive areas and render possible their access to the main roads and markets. | | |
| - Ghimbi - Mattu (167 km) | 67 | 3.8 |
| - Agaro - Ghera | 50 | 1.3 |
| 6. To bring an all-weather road to Chencia, the present capital of Gemu-Gofa Province with attendant benefits. It will also provide the same service if the capital is moved to Arba-Minch (40 km. southwest of Chencia). Total length 125 km. | 40 | 2.2 |
| 7. For training the staff | | |
| - Awash R. - Butagira (455 km.) | 10.5 | 0.4 |
| Total | 1 305.6 km | 78.5 |

18. The following are the main principles which have guided the program of development of the all-weather road network for the Second Plan

(1) to connect the already existing networks and thus eliminate the existing gaps (Addis Zemen-Dessie) and enable the large areas of the Harrar Province, where a network of all-weather roads of about 300 kms. already exists, to be linked with the country's main road network (Nazareth-Awash-Miesso).

(2) to open up for economic development new promising regions, such as the Awash and Wabi Shebelli Valleys, byroads Awash-Tendaho and Awash-Cumbi so far only surveyed and designed, and areas of coffee production by Lekempti-Ghimbi and Agaro-Bedelle-Gore roads. This last road is also important with a view to giving access to Gore, the center of the Province Ilubabor.

(3) to design roads on the basis of adequate technical standards, with regard to the classification of roads (highways, secondary roads and feeder roads), and in such manner make possible the most rational use of the available means.

19. The selection of road projects and their designing should be entrusted to the Ministry of Public Works and Communications. The designing of feeder roads and the organization of their construction should be decentralized and carried out through the Provincial Roads Division of the Imperial Highway Authority in the Provinces. The construction of feeder roads should mainly rely upon local resources, both financial and in respect of building materials and labor force. The study and later the application of soil-stabilization (mechanical, chemical cement, bitumen and similar) should be introduced in the feeder-road program. Maintenance of the secondary and feeder roads should be further decentralized and organized by Provinces. In principle, road maintenance has to be organized in such a way as to employ as much as possible the available domestic manpower.

20. The import of motor vehicles for commercial purposes should be placed under the control of the Ministry of Communications, because lack of control in the past has brought about a series of insoluble problems in road transport. By controlling import, a certain unification of the vehicles could be effected and the import firms would be obliged to keep necessary supplies of spare parts in stock. It will be important to avoid all unnecessary imports of vehicles,and to this end the Government expenditure as importing vehicles should be restricted and an efficient control of the use of this expenditure should be introduced.

21. In order to establish an efficient organization which will provide a steady promotion of bus transport in the country, it is necessary to put into effect the decision made concerning the organization of bus transport, by gradually establishing one bus enterprise for the whole country with a sufficient number of branch offices.

22. Road freight transportation should be promoted by (a) technical control of vehicles, (b) a tendency toward technically more uniform vehicles, (c) encouraging individual owners of trucks to organize, and (d) by establishing enterprises which will gradually create more stable relations in the field of road transport services. This will lead to an economic level of transport tariffs, which should be regulated by the Ministry of Public Works and Communications.

23. In order to improve traffic security it is necessary to organize a patrol service in the traffic police department, and to provide a technical control of vehicles on the main roads to enforce respect of traffic rules.

24. Railway Transport is carried out on two narrow-gauge track with a total length of 1,087 kms. (Djibouti-Addis Ababa 781 kms. of track, gauge 1,000 mm., and Massawa-Asmara-Agordat 306 kms. of track, gauge 1,000 mm., and Massawa-Asmara-Agordat 306 kms. of track, gauge 950 mm.,). The total transport of freight on both lines reached in 1953 E.C. 463,000 tons, or 191.2 million ton kilometres, and 700,000 passengers, or 65.8 million passenger kilometres. The First Five Year Plan envisaged the investments in railways, out of private funds of the Franco-Ethiopian Railways, to amount to Eth.$9 million. This sum was intended for the renewal of the rolling stock (Eth.$ 3 million) and for surveys and designs for the expansion of the railway network. No investment has been planned for the railway in Eritrea (Massawa-Asmara-Agordat).

25. Taking into consideration the significant changes which too place toward the end of the First Five Year Plan in the status of the company which operates the railway Djibouti-Addis Ababa (the Government holding 50 per cent of the shares), and considering the critical state of the track in Eritrea, it will be necessary in the next Five Year Plan to provi investments which will maintain the existing capacity of the railways, and also be able to satisfy the need for growth of railway transport anticipated for the next five years. The required investment in the railway Djibout Addis Ababa will be financed out of the Company's funds, while for the railway Massawa-Agordat it will be necessary to provide the funds in the budget. For this purpose an amount of Eth.$7 million has been planned for the investment program.

27. Considering the long-term development targets for industry, mining, and agriculture, a need will arise for the construction of new railway lines. It will be necessary therefore even in the Second Five Year Plan, to devote attention to survey and to plan the expansion of the existing railway network in the direction of Nazareth-Dilla, Agordat-Tesseney and particularly the line Awash-Tendaho-Assab. For this purpose the investment program for the Second Five Year Plan has allocated the sum of Eth.$ 3 million.

27. Air Transport. At the end of the First Five Year Plan Ethiopia already had fifteen years of experience in air transportation on domestic and international lines. Investment to the amount of Eth.$47. million for civil aviation was planned in the First Five Year Plan, 15.5 million for airport construction, and 32.0 million to purchase aircraft. By the end of the First Five Year Plan a decision was taken to introduce jet planes into the international air transport of the national carrier. In this connection it has been decided also to build a new airport in Addi Ababa and enlarge the airport in Asmara to make them fit for jet air transport. The necessary additional funds were provided from foreign loans, and the projects are under way. The sum of about Eth.$ 89.1 milli out of the total required by this program will have to be available in the first and second years of the Second Five Year Plan.

28. In addition to completing the "Jet Program", the Second Five Year Plan lays emphasis on the promotion of internal air transport. The airports for domestic transport must be gradually improved to enable them to handle all kinds of propeller driven aircraft and smaller jet planes, and to be used throughout the whole year. Old type aircraft should be replaced by modern airplanes, even if they are second-hand. In order to improve the utilization of the airport services is will be necessary to commercialize them by making them self-supporting organizations, instead of retaining the current budgetary administration.

29. Water transport. For many centuries Ethiopia was landlocked and an outlet to the sea was denied to her. Not until the Eritrean Federation with Ethiopia in 1952 G.C. were Ethiopian Maritime activities started again. Having now about 900 kms of seacoast along the Red Sea, situated on one of the main shipping routes of the world, with two good sea ports, Ethiopia has many possibilities for shipping and port traffic development, from which the whole national economy would greatly benefit. The First Five Year Plan set as one of the main tasks in this branch of transport and communication the expansion and equipping of Assab Port, which has been carried out successfully through the investment of the significant amount of Eth.$26.1 million. An initial purchase of ships for sea transport valued at 4.5 mill. had also been planned, but this was only partly implemented. In the planned training of personnel only modest results have been achieved.

30. After the main investment tasks in the First Five Year Plan have been fulfilled, steps must be undertaken for further development in order to reap full benefits from the past investment as well as for future possibilities. In the course of the First Five Year Plan problems had already arisen in the proper utilization of Ethiopian sea ports, particularly Assab Port. The capacity of the Ethiopian harbors had been estimated to be about 1.6 million tons a year. A great part of Ethiopian foreign trade traffic goes through the newly constructed Assab Port and is in a large measure dependent on road traffic, so that the problem of a more economic connection of Assab Port with the developing hinterland will have to be solved in the forthcoming period.

31. The remaining projects which have to be carried out in the Second Five Year Plan, are the following:

(1) To develop in the port of Massawa, and even more so in the port of Assab, better port facilities (faster handling of cargo, modern docking and repair facilities, safe navigation by day and night, fresh water supply, stores and provisions, etc.) in order to attract more shipping and cargoes.

(2) To form the Ethiopian Shipping Line through the purchase of dry cargo ships and tankers, or until such time as this becomes possible, to start operating with chartered cargo ships.

(3) To carry out certain urgent construction projects (workshops, lighthouses, flats, etc.).

(4) To work out and start the implementation of a program for training sea-going and other technical and administrative personnel.

32. Lake transport.- Of the numerous Ethiopian lakes, only Lake Tana has organized public transport facilities. Smaller harbors and lighthouses for day and night traffic have been built. In connection with the development of Bahar Dar and other settlements on the coast of Lake Tana, further development and promotion of transport on this lake is being planned. This must be speeded up by the intiative of an enterprise which should be established, under whose management the available equipment and ships will have to be placed. In addition to this, the opening up of traffic in connection with the development of fishing in Abaye Lake is being planned by the Second Five Year Plan, and the construction of necessary roads to connect this region with the existing road network has been foreseen. To secure this development of lake transport in the next Plan the amount of Eth.$ 800,000 is provided as investment.

33. River transport. In Ethiopia there is river traffic only on the Baro River in the southwestern part of the country, with the center at Gambella. From here small motor craft sail on the river as far as its mouth at the White Nile near the town Malakal (Sudan) and continue along the White Nile to Kosti. The River Navigation service of Sudan Railways maintains transport between Kosti and Gambella, so that along this route one part of Ethiopian foreign trade traffic is carried on with Sudan. Considering the undeveloped road network in the Gambella and Gore region, which is a large producer of coffee, it will be necessary to examine the possibilities of developing river transport on the rivers Baro, Omo and Gogeb, and of integrating it into the local transport plan for coffee from the centers of production to the main roads for further transportation, and possibly exportation. It is also necessary to study the possibilities for the development of river transport in the south-eastern part of the country on the Djuba and Uabi Shebelli rivers.

34. City Traffic in Addis Ababa The position of Addis Ababa as the capital and largest city of the Ethiopian Empire makes necessary the organization of a planned development of the city traffic. The city traffic in Addis Ababa is heavily overcrowded as can be seen from the fact that during 1953 49 buses had to transport some 12 million passengers covering 2.2 million vehicle-kilometers. The First Five Year Plan foresaw investment to an amount of Eth.$ 10 million for the construction of streets, and for introducing trolley-bus transport. Although considerable progress had been made during the First Five Year Plan in constructing streets and squares, the introduction of trolley-bus transportation has been postponed. Because of the configuration of the terrain in the city itself, and an abundance of electric power and in view of the growing demand for city transport, the introduction of trolley buses appears to be justified on economic grounds, and would contribute greatly to the release of the overcrowded city traffic. Considering the high rate of development of Addis Ababa and its traffic, it will be necessary in the Second Plan to concentrate on the accomplishment of the following tasks:

(1) To work out an urban plan to unburden the present town center by creating new town centers.

(2) Gradually to build an encircling road to connect the main lines of transport which meet in the center of the town.

(3) On the basis of surveys, including those already worked out, to introduce trolley-bus transportation and its combination with the autobus transport and sub-urban traffic, and to take a final decision and start the implementation of the accepted program.

(4) Gradually to construct traffic devices (traffic lights, signals, signs and inscriptions) as well as bus stations, parking spaces and street illumination.

The financial means for these investments will have to be provided by the municipal budget, and out of the income of municipal enterprises in the first place, supported by state allotments.

Posts and Telecommunications.

35. Until 1952 (G.C.) posts, telegraph and telephones were united within the P.T.T. Ministry. Telecommunications were separated from the P.T.T. Ministry as a self-supporting public agency, and in order to control and co-ordinate its activities the Imperial Board of Telecommunications was established. From then on, in the course of the past ten years, Telecommunications have developed successfully, while the posts, operating on the principle of a budgetary administration, fell behind considerably in activity and development.

36. Postal Traffic. The entire postal service is financed out of the State Budget to the amount of Eth.$ 1.2 million annually. The revenue of the posts is larger than the expenditure, which indicates that the posts can be financially self-supporting. In the First Five Year Plan no investment for the development of the postal service had been planned.

37. It will be necessary over the following five years to improve the Ethiopian posts and raise them to the level of the other advanced branches of transport and communications. To attain this aim it will be necessary to reorganize the posts on the principle of financial self-support. By an adequate investment policy a steady progress of the postal service should be secured, aiming at its gradual penetration into the farthest remote parts of the country, and to this end the postal services should subsequently introduce their own means of transportation (postal buses and trucks). Considering the insufficient number of post offices in Addis Ababa it would be desirable to erect a new modern equipped building for the Central Post Office.

38. Telecommunications.- The organization of Telecommunications covers the whole country and has its regional branch offices in Addis Ababa, Asmara, Dire Dawa, Jimma, Dessie and Gondar. The First Five Year Plan foresaw investment of Eth.$ 10 million for the development and promotion of telecommunications and this was provided in full. The Ethiopian Telecommunications, during their ten year independent operation on the principle of self-financing, progressed considerably, and have reached a satisfactory technical and organizational level.

39. In the coming Five Year Plan further development in telecommunications is foreseen, with a provision of rather large investment amounting to Eth.$ 26.5 million. In addition to the investment from their own funds a foreign loan amounting to about half of the total investment is planned.

## Chapter 15

# TRADE, CATERING AND TOURISM

### Trade and Commerce

1. Narrowness and a very limited scope are the fundmental characteristic of the Ethiopian market. Due to the present level of development of economy as a whole, and the dominant position of agriculture within it, a considerable part of production is of a subsistence character, and for that part of production the market is not an agent between the producer and consumer, i.e. the producer is at the same time the consumer of his own products. His purchasing power is very small and does not permit larger market expansion. The remainder of the population is relatively small in number (10 per cent of the total population) and due to an undeveloped employment structure and consequent low incomes of the nonagricultural population, cannot present a stronger incentive for market expansion. The insufficiently developed transport network, which does not yet cover all parts of the country, as well as the dispersed population which is scattered over the whole country, and in certain parts is not settled permanently, are additional factors which have seriously limited the expansion of the internal market.

### Recent Development

2. Although not completed, the implementation of the planned targets of the First Five Year Plan led to an expansion of the market. Estimated on the basis of a growth of industrial and agricultural production as well as export and import in the 1949-1954 period, the volume of trade has shown the following increase:

Volume of Trade in 1949 and 1954 (E.C.)

( In million Eth.$ )

| Item | 1949 | 1954 | Index Number 1954 = 100 | Rate of growth |
|---|---|---|---|---|
| Consumers goods | 531.2 | 654.5 | 123 | 4.2 |
| Raw materials | 76.6 | 110.0 | 144 | 7.6 |
| Investment goods | 43.3 | 72.3 | 167 | 10.8 |
| Total | 651.1 | 836.8 | 129 | 5.2 |

In the First Five Year Plan period the Ethiopian internal market expanded. The turnover in the volume of goods increased by 29 per cent, so that the average annual rate of growth amounted to 5.2 per cent. The increase of turnover in the volume of the investment goods was the highest

(67 per cent), and was followed by an increase in the turnover of raw materials, which amounted to 44 per cent. The expansion of both of these markets reflects the general economic policy, aimed at the accelerated economic development of Ethiopia. However, the investment goods and raw materials markets have remained insufficiently developed; the turnover of these goods was about 22 per cent in the total goods turnover in 1954 compared with 19 per cent in 1949.

3. Parallel with the expansion of the internal market, the implementation of the planned targets of the economic development of Ethiopia brought about new features in the organization of trade. In addition to private commercial organizations and merchants, two State Institutions also took part on the market viz. the Coffee Board and the Grain Corporation, both in the field of agricultural products turnover. Their appearance on the market proved to be fully justified, although they did not efficiently realize all the tasks they had undertaken.

4. Although Ethiopia's internal market expanded considerably in the 1949 - 1954 period, it retained all its former basic characteristics. The internal market has remained undeveloped, and with the exception of Addis Ababa and a few other towns, greatly dispersed. In a great number of settlements, including some urban settlements, the annual turnover of goods is so small that it makes impossible any development of modern trade which could concentrate sales.

## Development Targets

5. Targets for the 1955 - 1959 Plan period. The development of trade in the Second Five Year Plan period is dictated by the planned accelerated economic growth of the country, and the accompanying increase in the standard of living of the population. In this Plan period, trade will have to handle a considerably larger volume of goods. It is estimated that the turnover in the volume of goods in internal trade will increase as follows:

Volume of Trade in 1954 and 1959 (E.C.)

(In million Eth.$)

| Group of Commodities | 1954 | As per cent | 1959 (plan) | As per cent | Index Number 1954 =100 | Rate of growth |
|---|---|---|---|---|---|---|
| **Consumers' goods** | 654.5 | 78.2 | 903.0 | 62.7 | 138 | 6.7 |
| **Goods in process** | 110.0 | 13.1 | 318.6 | 22.2 | 290 | 23.7 |
| **Investment goods** | 72.3 | 8.7 | 219.0 | 15.1 | 303 | 24.8 |
| **Total** | 836.8 | 100 | 1 440.6 | 100 | 172 | 11.5 |

Parallel with this significant rise of the volume of internal trade (the volume in 1959 being 1.7 times that of 1954) the process of structural changes on the market, which started in the First Five Year Plan period, will continue. The share of the volume of trade in raw materials in the total turnover of goods will increase from 13.1 per cent in 1954 to 22.2 per cent in 1959, and that of investment goods from 8 per cent to 15.1 per cent. At the same time, the share of consumers' goods will decrease.

6. The expansion of the trade in raw materials is stimulated by the fast growth of industry that is envisaged in the next five years. It is estimated that in the 1954-1959 period the volume of industrial production will increase from Eth$116.4 to Eth.$369.6 million. This increase can be realized only if the supply of raw materials is sufficient to meet the fast rising demand of industry. Beside industry, other economic activities will also contribute to the growth of the volume of trade; the construction and building sector will have considerably to satisfy the greater investment demands, and the process of modernization which will start in agriculture.

7. The doubling of total investments in the 1954 - 1959 period in relation to the previous five-year period is a major factor, which dictates the expansion of the market for investment goods during the next five years. The anticipated changes in the pattern of investment, which are reflected in the bigger share of directly productive investments in the total value of investment as a result of planned targets related to the building up of new projects in industry, agriculture, and other sectors, will bring about a more pronounced demand for equipment and other capital goods. Since some of the big projects will be finished in the second half of the Five Year Plan period, the increase in demand will be felt particularly in the last two years of the Plan period.

8. Although at a slower pace, the market for consumers' goods is expected to expand in accordance with the planned rise of the standard of living. In addition to the increase in the turnover of consumers' goods, two other aspects of the development of consumers' goods trade in the forthcoming five-year period should be pointed out. First, the share of domestic production will increase in the supply of this market, and second, the trade network will also expand. The supply of more industrial goods by the domestic industry is brought about by the planned erection of new industrial enterprises, which in turn will automatically extend the internal market for consumers' goods.

9. The increased volume and structural changes in the turnover of goods envisaged to take place during the next five-year period will set rather complex tasks for the internal trade. The Second Five Year Plan will start a process of internal economic integration in Ethiopia in which internal trade will have to paly an important role. It will have successfully to link the manufacturing industry with agriculture, as the supplier of the necessary raw material. On the other hand, the pace of the modernization of agriculture will depend, among other things on the efficiency with which the necessary modern technical means are supplied to agriculture, particularly in those areas where their use will increase most

rapidly. Finally, commerce must contribute to the expansion of the market for consumers' goods by developing a desire on the part of the rural population to use more industrial goods as well as by directing the attention of industry to the variety and quality of goods demanded by the consumers.

10. Organization and Measures. One of the most important tasks of internal trade in the course of the next five-year period will be to improve considerably the organization of the purchase of agricultural products. It has already been stressed that agriculture will have to provide increased surplusses to meet the growing demands for export, for raw materials, and to provide food for the nonagricultural population, which will increase by about 500,000 people in this period. An efficient organization of the purchase of agricultural surplusses is in itself a difficult task, in addition to the initiative of private middlemen, which must not be understated, the Government will also have to intervene.

11. Government help will be useful in advancing the purchase of agricultural products through organizations which will be set up for the promotion of agriculture in general. The multipurpose co-operatives, as well as the public and co-operative big farms, should engage in the purchase of agricultural products from peasant holdings and in the preparation of products for export. The Agricultural Development Agency should co-ordinate the purchasing activity of co-operatives and big public farms and extend all necessary technical assistance to them in matters such as the organization of purchase, classification of products, storage, transportation etc. In this manner the necessary improvement in the quality of agricultural products for export could be achieved rapidly and, through higher prices, ensure more favorable terms of export trade and better results in earning foreign exchange.

12. Particular attention will have to be devoted to the organization of the trade in wheat and other cereals for the domestic market. In the coming years the trade in cereals will increase and the Government should therefore undertake necessary measures to stimulate the expansion of production, as well as to protect the interests of both the producers and consumers. The Grain Corporation is a suitable organization for carrying out Government policies in this sector of commerce, but there is a need for changes and improvements in its character. In order to store and keep the reserves for use when the situation on the market requires the Government's intervention, it will be necessary to build a certain number of silos in the course of the next five years.

13. The organization of the trade in agricultural products used by the manufacturing industry as raw materials does not present difficulties, and the industry's own purchasing network can most successfully perform this function. The tobacco trade, organized by tobacco factories, offers valuable experience and suggests that this method could be successfully adopted with other agricultural products such as cotton, oil seeds, and even meat. The advantages of these forms of organization are twofold. The industry contracts production with the producers direct and ensures the quality of raw materials it needs according to its production requirements. On the other hand industry, being interested in the expansion of

production and improvement of the quality of products in particular, organizes the extension services, supplies the producers with selective seeds, with tools and implements, and introduces the system of installment payment in kind i.e. payment with produce instead of in cash. Big commercial farms will also constitute an important source of supply of raw materials to the manufacturing industry.

14. Imports of investment goods will rise owing to the large investments the Government will make, particularly in industry, agriculture, and transport. The accelerated development of the national economy calls for the introduction of additional measures, the most important among them being the exemption of custom duties for those imported capital goods which are of key importance to the economic development, and the elimination of high trade margins. The Government should also take advantage of the existence of special technical agencies in agriculture and industry and use them to organize the import of capital goods needed for the projects it will have to finance.

15. Fairly large investments are needed for an adequate development of trade. It is forecast that the total investment in internal and foreign trade in the 1955-1959 period will amount to Eth.$ 22.0 million, excluding the increase of stocks which is estimated at Eth. $ 20 million. Government investment has to solve the problem of storing and keeping reserves of wheat in the big consumer centers. It is expected that the anticipated expansion of the market will induce private commercial establishments and merchants to invest more in trade, the more so since the private sector will have carry out the majority of the tasks set forth in the retail trade. The Government intervention here will be limited to the necessary price control, and to a stimulative credit policy which in particular will have to facilitate the expansion of the retail trade network in the areas where it will be most needed.

16. One of the urgent tasks is to Ethiopianize the retail trade. This is particularly necessary on account of the penetration of retail trade into the rural areas of Ethiopia. It is well known that foreign commercial capital is not permanently interested in promoting trade between agriculture and industry, and expecially not in increasing the turnover which would meet the requirements of an accelerated economic development. On the contrary, domestic trade capital, which is more strongly bound to the internal market, is, in principle, interested in expanding those relations. Of course, the process of the Ethiopianization of trade is a long-term one, and to bring it to success it is most important to avoid any too rigorous or austere administrative measures. Extending good credit facilities to Ethiopians in order to help them start business, expecially in the rural areas, appears to be the most efficient measure to apply.

Catering and Tourism

17. In the forthcoming period catering will have to develop in accordance with the demands of economic development and the increasing

purchasing power of the population. In this respect distinction has to be made concerning the specific targets for the development of small-scale catering on one hand, and the hotels on the other. The past years have witnessed a fairly efficient expansion of small catering, such as bars and the like, and this can be expected to continue in the next plan period.

18. The development of hotels is confined to the bigger towns and tourist places. Since there is a lack of big private capital in Ethiopia, it will not be possible to rely on market initiative to provide the desired expansion of hotels, and Government initiative is needed, but it will have to be restricted only to the bigger key projects, where private capital is not to be expected, or when the hotels established otherwise could not rise to and maintain the required standard of services. In particular, the Government should take the initiative in building hotels in Addis Ababa, as well as in several other places, which are important either as centers of economic development or of especial value for the development of tourism. In addition to Addis Ababa, the need for new hotels will grow intensively in Assab, which should develope into the country's most important seaport for export and import and become an important industrial center. The increase of hotel facilities will make this seaport attract a larger turnover of cargo.

19. It is envisaged that in the next five-year period three to five hotels with a total of 600 - 800 beds, and 12-15 boarding houses, will be built, so that the total number of beds in Ethiopia should increase by 20 per cent by the end of 1959 as compared to 1954.

20. Modern tourism in Ethiopia is at the initial stage of development. The pleasant climate, mineral hot springs, natural beauty, historical monuments and hunting possibilities with which this country is endowed, constitute untapped sources of the national wealth, and offer great possibilities for the development of planned tourism. There are good prospects of increasing the inflow of tourists during the European winter season. A well-organized information service abroad and the provision of all necessary tourist facilities at home, such as hotels, transportation etc., are indispensable if tourism is to give its full potential share to the country's economic progress. However, this is a longer-term task, and the means which can be devoted to tourism during the next five year period are such that only very moderate tasks may be set. In the Second Five Year Plan period Government activity will be concentrated on organising a certain number of tourist information centers abroad, restoring historical monuments and providing all the necessary facilities for giving one of the selected places the best chance to attract the attention of foreign tourists quickly.

## Chapter 16

# FOREIGN TRADE AND BALANCE OF PAYMENTS

### Foreign Trade in the First Five Year Plan

1. Foreign trade is to play an increasingly important role in Ethiopian economy. After the expanding industrial and agricultural output foreign trade will have to constitute the third most propulsive sector of the national economy. In fact, without achieving the necessary expansion of foreign trade to match the requirements of the growing economy, neither could the immediate production targets set forth in the Second Plan be achieved nor could a sound basis for a sustained accelerated development of the Ethiopian economy be established. Planning social and economic development, which is justified on the ground that it enables the fastest accomplishment of the targets of nation-wide significance, cannot be considered complete and efficacious unless foreign trade is fully integrated into the Plan. Moreover, the failure fully to integrate foreign trade into the Plan with regard to the targets that have to be realised, and the required organisation and measures, would seriously hamper the implementation of the basic development targets. On the basis of the evaluation of past trends, and of the demands which the anticipated rate of the national income growth in the Second Plan imposes upon foreign trade, its policies and organization have to be worked out with the aim of enabling foreign trade not only to facilitate the accomplishment of the Second Plan development targets, but also to give impetus to an even more intensive utilisation of the existing vast production potentialities of the Ethiopian economy.

### The Development - during the First Plan

2. From 1949 to 1953 the total volume of foreign trade increased by 27 per cent, the volume of exports by 18 per cent and that of imports by 34 per cent, with an annual deficit in the external trade balance of only Eth 20.3 million. These results become still more significant in the light of the fact that Ethiopian economy is of a monocultural character, and that during the period under consideration the terms of trade were very unfavourable.

3. The share of agricultural products in the present export pattern is highly significant. Thus, in the year 1952, which may be used as fairly representative of the present structure of foreign trade, coffee, hides and skins, oil seeds, cereals and meat accounted for as much as 87 per cent of the total value of Ethiopian exports, while coffee alone represented one half of the total export in that year. In the import pattern there has been too much emphasis laid on consumers' goods, which in 1952 accounted for about 60 per cent of the total value of imports; at the same time the share of goods in process and capital goods in the total value of imports was much smaller, being 20 per cent each.

4. The situation on the world market was characterised by a

deterioration in the terms of trade in respect to the prices of products which Ethiopia exports and imports. During the 1949 - 1953 (E.C.) period the prices of Ethiopia's export commodities went down by 4.7 per cent and the prices of imported goods decreased by 0.2 per cent, as a consequence the inflow of foreign currency decreased by Eth$129 million.

5. More sucess would have been achieved if the foreign trade policy of Ethiopia had been less influenced by liberal tendencies. The inadequacy of such policies in the conditions of an accelerated economic and social development may be seen in the volume of foreign trade as much as in its structure and geographic distribution over the last five years.

(1) The differences which occurred between the planned exports and imports and their realisation, were not so pronounced, but they still adversely affected the Ethiopian economy because exports have been smaller by Eth$112.6 million, or 11 per cent, and imports were higher by Eth$13.3 million, or 1.4 per cent.

(2) The First Five Year Plan predicated a much more favourable structure of import than was realised: the planned import of capital goods was 79 per cent implemented while the import of consumers' goods exceeded the planned targets by 28 per cent.

(3) The geographical distribution of foreign trade had been very uneven in the past five-year period. In the total Ethiopian imports in 1951/52, Western Europe supplied 43.1 per cent, U.S.A. 15 per cent, Japan 13.1 per cent, Eastern Europe 7 per cent, India 6 per cent, and all the African countries 2.3 per cent, while in Ethiopia's overall exports Western Europe took 26.6 per cent, U.S.A. 38.1 per cent, Eastern Europe 3.1 per cent, Japan 2.6 per cent, all the African countries 6.9 per cent, and India well under 1 per cent.

## Foreign Trade in the Second Five Year Plan

6. General Outline- The Second Five Year Plan sets the foreign trade of Ethiopia very large and responsible tasks, the fulfilment of which will have to mark a decisive step concerning both the structure of Ethiopian economy and the volume and structure of foreign trade itself. In the course of the Second Five Year Plan exports should increase from Eth$194.9 million in 1954, to Eth$327.7 million in 1959, or by 60 per cent i.e. at an average annual rate of 11 per cent. Imports are expected to grow faster, and it is estimated that they will increase from Eth$234.2 million in 1954, to Eth$419.2 million in 1959, or by 79 per cent, which gives an average annual rate of 12.3 per cent. As a consequence a significant change will have to occur in the share of the total volume of foreign trade in the net domestic product. This share will have to increase from 20.9 per cent in 1954, to 29.9 per cent in 1959, implying increases in the share of exports from 9.5 to 13.1, and that of imports

from 11.4 to 16.8 in the same years.

7. The anticipated global movements of foreign trade which are a result of a more detailed balancing of exports and imports with other development targets of the Second Plan cannot be considered exaggerated. Concerning exports it is well known that Ethiopia provides export possibilities which are not yet sufficiently organised, as in the case of agricultural products, where only a small increase in production could ensure a considerable volume for export. As far as imports are concerned the estimated volume of investment in the Second Plan requires a considerable increase of imports, because the investments will materialise only through the import of equipment and machines.

8. Starting from the recent movement of exports and imports, and the estimated changes in the volume of foreign trade, as well as in invisible exports over the next five years, it is expected that the balance of current transactions will develop in the Second Plan as follows:

Balance of Ethiopian Current Transactions

in 1953, 1954, and 1959 (E.C.)

(In million Eth$)

| | 1953 | 1954 (estimated) | 1959 Plan | Index Number 1954 = 100 |
|---|---|---|---|---|
| Export (FOB) | 184.1 | 194.9 | 327.7 | 168 |
| Import (CIF) | 228.5 | 234.2 | 419.2 | 179 |
| Trade Balance | - 44.4 | - 39.3 | - 91.5 | 234 |
| *Invisible Exports | + 10.9 | + 3.9 | + 6.0 | 154 |
| *Balance of Current transaction | - 33.5 | - 35.4 | - 85.5 | 242 |

*The years refer to the Gregorian Calendar Years 1960, 1961 and 1966 respectively.

9. Exports - In the Second Five Year Plan exports will rely mainly on the traditional agricultural export products, but an important place will gradually be occupied by new products of industrial origin as well as by those of the mining industry. In this way exports will obtain a larger variety as well as the degree of manufacture of the products. This will not only facilitate their acceptance in the old markets but will also strengthen the competitive position of Ethiopian goods in new markets and will contribute to the improvement of the terms of trade. The following table summarizes the anticipated changes in the volume and structure of exports by basic economic branches in the Second Plan.

## Export by Basic Economic Branches in 1954 1959 and 1955 - 1959 (E.C.)

(In million Eth$)

| Basic Economic Branches | 1954 | % | 1959 | % | 1955-1959 | Index Number 1954 = 100 |
|---|---|---|---|---|---|---|
| Agriculture | 182.4 | 93.6 | 237.0 | 72.3 | 1,071.0 | 129 |
| Industry | 10.2 | 5.2 | 80.0 | 24.2 | 185.5 | 784 |
| Mining | 2.0 | 1.0 | 10.0 | 3.0 | 38.1 | 500 |
| Handicrafts | 0.3 | 0.2 | 0.7 | 0.5 | 2.3 | 233 |
| Total | 194.9 | 100 | 327.7 | 100 | 1,296.9 | - |

The largest increase is envisaged in the export of industrial products, where the volume in 1959 is planned to be 7.8 times that of 1954. The next largest expansion is foreseen in the mineral products, the volume of which should increase by 400 per cent by 1959. The export of handicrafts is to increase by 133 per cent, and that of agricultural products by 29 per cent. The increase in the export of handicraft products requires that this sector must contribute more to the country's export potentiality in future. These trends in export by basic economic branches will have to bring about important changes in the participation of agricultural and industrial commodities in the total exports. The share of agricultural products, will have to decrease from 93.6 per cent in the 1954 exports, to 72.3 per cent in 1959, while that of the manufactured products in the same years will increase from 5.2 per cent to 24.2 per cent.

10. Fairly moderate estimates of export possibilities show that the following development of export of the more important agricultural products over the next five years may be confidently expected.

## Export of Selected Important Agricultural Products in 1954, 1959, and 1955 - 1959 (E.C.)

(In million Eth$ in Prices 1954)

| Products | 1954 | 1959 | 1955 - 1959 | Index Number 1954 = 100 |
|---|---|---|---|---|
| Coffee | 99.6 | 135.0 | 601.0 | 135 |
| Hides and Skins | 22.7 | 28.7 | 125.0 | 126 |
| Pulses | 17.0 | 18.9 | 90.0 | 111 |
| Oilseeds | 14.9 | 21.2 | 96.0 | 142 |
| Chat | 10.2 | 11.0 | 54.0 | 107 |
| Fruit and Vegetables | 4.7 | 6.2 | 27.0 | 131 |
| Others | 13.3 | 16.0 | 78.0 | 118 |
| Total | 182.4 | 237.0 | 1,071.0 | - |

In the coming five-year period coffee will remain the most important export commodity. In spite of a planned substantial increase in export (35 per cent more in 1959 than in 1954) the share of unprocessed coffee will decrease in total from 51.1 per cent in 1954 to 41 per cent in 1959, due to the changes in the basic structure of the export, already referred to. It is envisaged that in 1959 the export of powdered coffee will start and amount in that year to Eth$7 million. In agricultural exports the share of coffee will increase from 54.5 per cent in 1954 to 56.9 per cent in 1959. Such development of coffee export may be expected on the grounds that the production of coffee will increase, and that better decortication, sorting, and packaging will be achieved. Coffee export will have to bring about further important inflow of foreign exchange, and this is a realistic and feasible target in the light of two facts. Firstly the prospects for increasing export on the European market are good, particularly in view of the opening of new markets in the Eastern European Countries, and secondly, the production of coffee may, if necessary, be easily extended to offset the adverse effects of an eventual further fall in coffee prices on the world market.

11. Hides and skins rank second in the total value of export and in the export of products of agricultural origin. Their share in total exports is expected to fall from 11.7 per cent in 1954, to 8.8 per cent in 1959, while their share in the export of agricultural products will probably remain unchanged (12.1 per cent in 1959 as compared with 12.1 per cent in 1954). These export targets can be achieved without difficulty owing to the immense livestock resources in Ethiopia, estimated to amount to about 20 million head. These great reserves should be more intensively utilised, because raw hides are products already introduced on foreign markets, the demand for which will probably remain fairly strong.

12. The anticipated increase of 11 per cent in the value of exports of pulses during the whole Second Plan is rather marginal so that its realisation should not present a problem, particularly since domestic production can be expanded without large and special efforts.

13. The export of oil seeds is estimated to increase most rapidly. The climatic conditions in Ethiopia are very favourable for expanding the production of oil seeds, and there is a considerable demand for them on foreign markets. It may be expected therefore that they will retain almost the same place among the agricultural export products that they have occupied until now (in 1954 their share was 8.1 per cent, and in 1959 it is expected to be 8.9 per cent).

14. Chat is a product which is purchased in considerable quantities in the Near East and Middle East. However, since no considerable further increase in demand on the foreign market can be expected, it is planned that chat should retain approximately its present share in the value of agricultural export.

15. Fruit and Vegetables are products which have not as yet found the importance in the Ethiopian commodity exports that they deserve, considering the climatic and soil conditions, which are very favourable for large-scale production. No doubt large reserves exist here for increasing export by placing Ethiopian fruit and vegetables on the West European market, but this will require a much better organization of production, and the improvement of overseas transport facilities in particular.

16. There are a number of other products such as eggs, paprika (chili), honey and wax, and particularly products of hunting and fishing, which have good prospects for a place in foreign markets. The value of exports of these products is estimated to increase by 18 per cent over the next five years. With more attention devoted to the organization of larger production and trade in these products they could become a significant source of foreign exchange.

17. The Second Five Year Plan marks a definite turning point in the structure of Ethiopian exports, because the industrial and mining products will begin to occupy a more and more significant position. Their share in the value of total exports should increase from 6.4 per cent in 1954 to 27.7 per cent in 1959. The following table presents the expected development in the commodity pattern of industrial and mining exports during the next five years.

**Export of Industrial and Mining Products**
**According to their Basic Branches**

(In million Eth$)

| Basic Branches of Industry and Mining | 1954 | 1959 | 1955 - 1959 |
|---|---|---|---|
| Manufacturing Industry | 10.2 | 80.0 | 185.5 |
| Including: | | | |
| Food Industry | 9.6 | 62.5 | 159.9 |
| Leather & Shoe Industry | - | 9.0 | 10.1 |
| Building and Non-metal Industry | 0.1 | 3.2 | 4.1 |
| Chemical Industry | - | 3.3 | 4.4 |
| Other industries | 0.5 | 2.0 | 7.0 |
| Mining | 2.0 | 10.0 | 38.1 |
| Including: | | | |
| Gold | 1.9 | 3.0 | 13.5 |
| Potash | - | 6.0 | 21.0 |
| Other | 0.1 | 1.0 | 3.6 |
| Total | 12.2 | 90.0 | 223.6 |

18. The products of the food industry will occupy the most significant place among the industrial and mining products. This development is based on the extensive raw materials and the large investments aimed at expanding the food industry in the Second Plan. It is expected that the share of the products of the food industry in total exports will increase from 4.9 per cent in 1954, to 19 per cent in 1959. It is envisaged that among the products of this industry in addition to sugar and edible oil, canned meat, fish, milk, and powdered coffee will take a particularly firm hold in exports. In addition to these, other Ethiopian finished industrial products will have to appear on the world market, such as footwear, sacks, blankets, cement, asbestos. As a consequence the need to import these goods will decrease and eventually cease.

19. Mining production will still occupy a modest place in the Second Five Year Plan, but even then they will not play a subordinate role because the estimated value of the export of gold over the next five years amounts to Eth$13.5 million, and that of potash Eth$21.0 million, both figures being more significant than many agricultural and food-industry products taken separately.

20. The development of exports during the next five years as envisaged in the previous paragraphs emphasizesthree factors which make the export targets economically sound and realistic propositions. Firstly, the growth of domestic production of particular agricultural and manufacture products for export is secured by planned production targets in the respective fields. Secondly, the estimate of export surpluses is made after calculating the changes in the volume and pattern of domestic personal and other consumption, one of the great advantages of Ethiopia is that a growth of purchasing power of the rural population, as well as of that newly employed in industry and other activities, does not call, to any great extent, for an increase in imported consumers' goods or a decrease of export surpluses. Thirdly, the placing of Ethiopian merchandise on foreign markets is based either on already contracted shipments, or on rather moderate estimates of the possible future trends toward the essential improvement that will have to take place in the production of export goods and organization of foreign trade.

21. Imports - Until Ethiopia establishes her own industry to supply domestic needs for machines, tools, consumers' durables and other industrially manufactured goods, she will be obliged to import these products, as well as many raw materials. Since the investment program of the Second Five Year Plan is larger and more complex than that of the First Five Year Plan, it is fully understandable why changes have had to be made in both the volume and the structure of imports. This may be seen from the figures of imports by basic commodity groups in 1954, compared with the planned targets for 1959, and the totals over the five-year 1955-1959 period

## Imports in 1954, 1959, and 1955 - 1959

(In Eth.$ million)

| Basic commodity groups | 1954 | % | 1959 | % | 1955-1959 | Index Number 1954-100 |
|---|---|---|---|---|---|---|
| Capital Goods | 58.8 | 25.1 | 179.4 | 43.3 | 709.1 | 305 |
| Goods in Process | 47.8 | 20.4 | 89.3 | 21.1 | 329.8 | 190 |
| Consumption Goods | 127.6 | 54.5 | 150.5 | 35.6 | 714.5 | 110 |
| Total | 234.2 | 100 | 419.2 | 100 | 1 753.4 | 179 |

22. In order to achieve an accelerated economic and social development, it is inevitable that imports should grow faster than exports, and that the import of capital goods and goods in process should increase faster than the import of consumers' goods. The preponderance of consumers' goods in the pattern of the Ethiopian imports in 1954 is clearly shown by their high share of 55 per cent in the total value of imports, while the share of capital goods was only 25 per cent. The Second Five Year Plan cannot preserve this pattern; in fact it introduces substantial changes by increasing the share of capital goods to 43 per cent, and decreasing that of consumers' goods to 36 per cent, whereas the relative position of goods in process should remain practically unaltered.

23. In the course of the Second Five Year Plan it will be necessary to import capital goods to the value of Eth.$709.1 million. It may be reasonably expected that these imports will be possible, due to the anticipated increase in exports, as well as to Ethiopia's credit capacity and the possibilities of utilizing economic and technical assistance. The major part of capital goods is intended for the development of industry, agriculture, and electric power, while a considerable part will go to transport and communications.

24. The completion of industrial projects that are in construction, and the construction of new factories will depend on increased domestic raw material. This will be particularly so in the food industry, the footwear and chemical industries, as well as in the nonmetal industry. However, the need for raw materials which Ethiopia does not at present possess, such as crude oil, rubber, steel, fertilizers, and selected seeds will not cease, but will in fact increase. Therefore, besides a considerable expansion of her own raw material production, Ethiopia will have to increase the import of raw materials from the Eth.$47.8 million estimated for 1954, to Eth.$89.3 million in 1959, so that these imports will amount to Eth.$329.8 million over the whole Five Year Plan.

25. The possibility of substituting domestically produced goods for those imported has been the main underlying principle in estimating the import of consumers' goods. An equally important aspect was the need to secure the foreign currency earned through exports and derived from other sources, primarily to import the necessary capital goods, and then the raw materials. At the same time the need to maintain, and to raise the living standards of one part of the Ethiopian population has not been neglected, although due to the need for utilizing the foreign currency rationally, it will not be possible to satisfy these requirements fully. With this in view it has been planned moderately and gradually to increase imports, particularly of durable consumers' goods, while imports of most of the other consumers' goods will be kept on approximately the present level. The import of consumers' goods cannot however be considered small, bearing in mind that its total value over the next five years is planned to amount to Eth.$714.5 million.

26. Invisible Exports and Imports.- Ethiopia, as a country which has taken the road of faster economic development, must necessarily encounter problems in balancing the deficit of trade, and the balance of payments, and must seek their solution by way of various sources of international financing.

27. The transactions of visible and invisible exports, their credits and debits, as well as the balance itself, are expected to develop in the Second Plan as follows:

### Invisible Exports and Imports in 1954, 1959 and the 1955 - 1959 Period

(In million Eth.$)

| Type of Transaction | 1954 | | 1959 | | 1955-1959 | |
|---|---|---|---|---|---|---|
| | Credit | Debit | Credit | Debit | Credit | Debit |
| Services | 45.6 | 54.3 | 67.0 | 76.0 | 244.0 | 302.6 |
| Transfer Payment | 36.3 | 23.7 | 51.0 | 36.0 | 118.0 | 153.0 |
| Total | 81.9 | 78.0 | 118.0 | 112.0 | 362.0 | 455.6 |
| Balance of Invisible Exports and Imports ± | +3.9 | | +6.0 | | -93.6 | |

Note: (1) Besides the difficulties with regard to the two Calendars, there were also difficulties in working out the values of current and capital transactions on the basis of available statistics. For these reasons the figures presented are of a rather tentative character but they still provide good indicators of the basic trends.

In 1954 and 1959 respectively, taken separately, the balance of invisible exports and imports should show a small credit of Eth.$3.9 million and Eth.$6 million. On the other hand the balance of current transactions will show a total debit of Eth.$93.6 million by the end of 1959. The reason for this lies, above all, in the much more intensive building activity which will be carried out in the first years of the Second Plan, so that not only import but also a larger influx of foreign qualified personnel will cause larger expenditure. Further, the existing investments and credits will be followed by new ones, which will appear cumulatively before economic, technical, and other assistance, as well as tourism, begins to act in the opposite direction with an increased inflow of foreign currency. Because of this it is necessary to try to obtain grants amounting to at least Eth.$80 million in adequate time. U.N. Assistance of Eth.$15 million as well as an inflow from foreign tourism of Eth.$55 million for the whole period, will be necessary.

28. It was perfectly proper for Ethiopia to take advantage of the various forms of economic and technical assistance, and on this basis an influx of about Eth.$100 million was achieved during the First Plan. At present, this is one of the normal sources of international financing which has been accepted by all the countries in the world, developed and undeveloped. As far as Ethiopia is concerned, it may be stated with certainity that she has utilized this source of financing on a very modest scale, more modestly than many of the countries on the same level, and even on a higher level, of economic development. This is especially true with regard to the financial relations with the Internaional Government Organizations which form a constitutent part of the United Nations. Therefore, larger activity in Ethiopia on the part of these organizations, particularly UNESCO, the World Health Organization, UNICEF, etc. is very desirable.

29. Foreign tourism is a source of foreign courrency which Ethiopia has still barely exploited, in spite of the very favorable conditions that exist for its development. In addition, it is necessary to consider in more detail the possibilities which handicraft and cottage industry products, typical of Ethiopian folklore, offer to increase the foreign currency which tourists spend in the country. By the above and other action the inflow of foreign currency would increase so that the active items of the visible and invisible transactions could grow considerably and together lead to a much more favorable balance of payments.

30. Foreign Currency Deficit.- It is estimated that the total foreign currency deficit of the next five years will amount to Eth.$638.5 million. It will have to be covered by public loans concluded abroad amounting to Eth.$339.5 million, by foreign direct investment of Eth.$177.2 million, and by grants-in-aid of Eth.$121.8 million.

31. The financing of the foreign currency deficit, according to the most careful estimates, will not present a difficult or especially serious problem during the Second Five Year Plan, due to the fact that at the end of the last year the foreign public loans granted to the amount of Eth.$370.7 million were still unused. This amount already covers 65 per cent of the total deficit anticipated to develop during the Second Plan. Finally, if the need arises, it is always possible to utilise international sources for bank, commercial, or revolving credits as well as manipulative credits, on the basis of various forms of payment agreements. In any case the International market, particularly that of public capital, offers various possibilities of securing the necessary amounts, which will assist the economic development of the developing countries, and especially of Ethiopia, which rightly enjoys outstanding distinction in international economic and political relations.

32. The expected direct private investment of Eth.$177 million during the Second Plan is based on the fact that Ethiopian economy offers a much better general economic climate, not only because the prospects for profitable investments are larger, but also because in near future the investment law will extend all the necessary fiscal and other facilities to foreign investors, as well as the necessary guarantee in respect to the security of their investment. It can therefore be anticipated that foreign capital will show an interest in investment, even to an extent beyond the estimated requirements. In addition to direct private investments, other opportunities for the participation of private capital can also be opened; for example, by issuing shares or bonds, obtaining long-term private loans, etc. while preserving the full economic and political sovereignity of the country.

33. The amount of Eth.$10 million foreign exchange reserve which is foreseen as manoeuverable reserve, will probably not have to be utilized, considering that the whole foreign currency deficit is sufficiently covered by international financing. However, if the need should arise, particularly to avoid unnecessary delay in the normal process of import, it would not present any difficulty, because Ethiopia possesses a total gold and foreign exchange reserve to an amount of about Eth.$150 million, and has, in addition, a regular average annual production of gold valued at over Eth.$4 million. This amply [illegible] the country's international solvency, and together with a firm internal purchasing power of the Ethiopian dollar, a desired stability of the balance of payments.

34. Organization. The possibility exists that the objectives set for foreign trade and balance of payments by the Second Five Year Plan will not only be achieved, but also surpassed to a reasonable extent. This would not however be feasible without a proper and efficient foreign trade policy and organisation. It is essential that a series of systematic and synchronised economic and other measures be introduced, whereby the Government will intervene in order to direct foreign trade relations and thus secure the desired development of the national economy.

35. It will be necessary, above all, to take certain measures, which elsewhere constitute the most widely applied economic instruments of national foreign trade policies.

(1) The present customs tariff is primarily of a fiscal character, but it should be revised so that it can comply with the aims of domestic product protection, and accordingly ensure the control of imports and stimulation of exports.

(2) The credit policy, as well as the premium and subsidy policies, should aid the development of production, purchase of products, reduction of transport tariffs etc. in order to promote exports and facilitate and secure the planned imports.

36. In addition, it is necessary to consider in detail the administrative measures in foreign trade policy, such as conditional import, licensing etc. in case the established economic instruments prove ineffective. This will in all probability be necessary with regard to the import of capital goods and machines, and certainly in the import of luxury products.

37. The Government will find it urgently necessary to conclude a series of bilateral and multilateral economic agreements. Investment agreements will occupy a special position among the other international economic agreements. These specific agreements on the exchange of goods will have to regulate the purchase of capital goods and machinery as well as the manner of payments. The advantages of these agreements are that they provide a long-term provision of foreseen investment construction, and consequently the utilization of foreign loans.

38. The existing Chamber of Commerce should become more active, and to achieve these aims there is need for better internal organization, greater emphasis on the mobilization of internal surplusses for export, and a better joint participation at international expositions and fairs.

39. The present network of foreign trade corporations will have to become stronger, as this would set up a much firmer basis for the fulfillment of the foreign trade plan. It will be necessary therefore to begin to organize Government or mixed foreign trade corporations for exports and imports with an extensive network of foreign representatives and agencies.

40. The implementation of all the stated tasks calls for a considerable number of qualified and skilled personnel; consequently it will be necessary to consider in detail the measures to be undertaken in the field of research and education in order to qualify Ethiopian personnel to deal with foreign trade and international payments in the shortest possible time.

## Chapter 17

## EDUCATION AND CULTURE

### Education

1. The choice of an intelligent educational policy and its efficient organizational forms, as well as the readiness to make the most determined efforts towards the implementation of the objectives set forth in each stage, are of such a nation-wide significance that all these questions have to be approached with utmost care and deepest sense of national responsibility. It is not an exaggeration to state that in Ethiopia, further elaboration of a most suitable educational system is one of the key factors on which the achievements of desired goals of the social and economic development of the nation depend.

2. In approaching the problem of the educational system which will best suit the requirements of a speedy long-term socio-economic development, it is necessary, above all, to define clearly the basic objectives and the scope of education. Education constitutes an important component of the standard of living and as such it is a goal in itself. Owing to the intensity of the desire to reach higher levels in education as quickly as possible, there is a tendency to absorb too much of the limited national resources and thus hamper the possibilities of a faster economic growth. In fact, an expanded material basis is essential for achieving higher educational and cultural levels in the future. On the other hand, education is at the same time a social activity with definite economic connotation. It is a process of human investments, i.e., it forms an indispensable part of an overall investment activity, whereby national and human investments are so closely interrelated that optimum results of an investment policy cannot be expected unless the development targets for the various economic and social activities are properly matched with the educational program.

3. In that sense, education in Ethiopia cannot be considered as an end set apart from the general requirements of the socio-economic development. It has virtually to constitute an integral part of the overall planning of the socio-economic development. This dictates the objectives and scope of education in Ethiopia. It has primarily to serve the needs of the country's development and thus give its fullest contribution to the achievement of the national goals. From this it is easily perceived that education in Ethiopia has to be taken in its broadest sense: it does not only imply the activities of the educational institutions proper but of necessity also stretches over the whole set of activities, ranging from training manpower for various jobs and skill-levels to the various forms of broadening the educational and cultural levels of the people.

4. Further elaboration of the educational system in Ethiopia in the first place calls for a selection of priorities. Consequently emphasis should be laid on those forms and types of education and training which

will open the most efficient means for achieving the development targets set forth in the Second Plan. Moreover it will have to lay down the foundations for an educational pattern that will contribute to the maximization of the speed at which Ethiopian society can move towards advanced levels of an economic and social life and living conditions. However, the evaluation of the existing situation and the results achieved so far, as well as the magnitude and the structure of the demand for personnel which the anticipated rate of growth of various economic and social activities will generate, provides sufficient ground for setting up basic educational targets for the Second Five Year Plan. This task is of a rather complex nature and requires organized research, taking into account the peculiarities of the Ethiopian conditions, with the aim of building up an educational structure which will best suit the targets of the socio-economic advancement of the Nation.

5. Recent Development. The lack of population statistics seriously hampers a precise evaluation of the general educational levels of the population and the structure of manpower with respect to technical education and levels of skill in particular. However, the available statistical data reveal that in the past years there has been important educational activity in the country which has resulted in a significant continuous rise in the number of students in the Government educational institutions. The increase of the number of students in the last five years, 1949-1953, can be seen from the following table:

Pupils Enrolled in Primary, Secondary and Post-Secondary Government Schools, 1948 - 1953 (E.C.)

| School Year | Primary* | Special | Academic Secondary | Post Secondary | Total | Index Number 1948 = 100 |
|---|---|---|---|---|---|---|
| 1948 | 109.368 | 1.495 | 2.097 | 334 | 113.294 | 100 |
| 1949 | 135.749 | 2.217 | 2.628 | 466 | 141.060 | 125 |
| 1950 | 150.892 | 3.245 | 3.492 | 605 | 158.234 | 140 |
| 1951 | 158.005 | 3.648 | 4.496 | 760 | 166.909 | 148 |
| 1952 | 170.460 | 3.646 | 5.273 | 827 | 180.206 | 159 |
| 1953 | 176.726 | 3.598 | 5.626 | 939 | 186.889 | 165 |

*Grades 1 - 8

During the last five years the total number of students in the Government schools has increased by 65 per cent or progressively 11 per cent per annum, this rate having been determined by the rate of increase of pupils in the primary schools due to the fact that in 1953 177 thousand of these pupils were making up as much as 95 per cent of the total number of students in the Government schools. It is a favorable trend which has been shown in the faster increase of the students of special secondary and post secondary levels, whose number doubled in the same period. Nevertheless, their total number in the schools is very small, and even adding the small number of pupils who attend the non-Government primary schools, the number falls very far short of the actual needs.

6. Though the Government school system is the backbone of national education, and the future of the educational activity in the country depends on the development of this system, the non-Government schools at present play a significant role in the general education of the population. As compared with the total enrolment in the Government Primary and academic secondary schools in the school year 1953, those non-Government schools (Community, Private, Mission and Church Schools), which follow the curriculum of the Ministry of Education, have alone contributed more than one third of the total number of students enrolled into the twelve grades. When the students in the non-Government schools which do not follow the curriculum of the Ministry of Education are taken into account, then the balance is much in favor of the non-Government schools. According to the information from the Ethiopian Orthodox Church Head Office, the Orthodox Church schools have enrolled, in the 1953 school year, more than 600,000 students. This is 3.4 times the total enrolment in the Government schools in the same year. No doubt there is a significant difference in the quality of education of these two school systems, but as far as the problems of reducing the rate of illiteracy and the extending of basic primary education are concerned, the contribution of the church-schools cannot be ignored.

7. By increasing the number of graduates of different special schools, educational activity in the past five years contributed well towards meeting the increasing demand for skilled personnel in business and social services.

### Graduates in Special Schools from 1949 - 1953 (E.C.)

| Speciality / School Year | 1949 | 1950 | 1951 | 1952 | 1953 |
|---|---|---|---|---|---|
| 1. Elementary School Teachers | 372 | 510 | 448 | 455 | 366 |
| 2. Secondary School Teachers | - | - | 20 | 16 | 18 |
| 3. Commercial Education | 40 | 126 | 143 | 196 | 196 |
| 4. Tech.& Vocat.Education | 115 | 146 | 171 | 343 | 213 |
| 5. Agricultural Education | 65 | 72 | 79 | 95 | 78 |
| 6. Public Health Education | 45 | 80 | 102 | 90 | 103 |
| 7. Others | 30 | 34 | 112 | 73 | 41 |
| Total | 667 | 968 | 1,077 | 1,268 | 1,015 |
| Index 1949 = 100 | 100 | 145 | 162 | 190 | 172 |

7. The total number of graduates from special secondary schools increased by 72 per cent over the last five years, their number in 1949 being 667, and rose to more than one thousand by the end of 1953.

8. The young institutions of higher learning in Ethiopia trebled the number of their graduates in the period under consideration: while the number of graduates in the 1949 school year was only 41, four years later it increased to 118. The actual number of enrolled students in the higher institutions at home in 1953 was 883. The distribution of graduate students and those still studying in the various faculties and colleges is brought out in the following table:

### Number of Graduates During 1949 - 1953 (E.C.) and Students Enrolled in 1953

| Institution / School Year | Graduated 1949-1953 | Enrolled 1953 |
|---|---|---|
| 1. Faculty of Science | 15 | 97 |
| 2. Faculty of Arts | 161 | 308 |
| 3. Engineering College | 57 | 128 |
| 4. Building College | 28 | 91 |
| 5. Agricultural College | 124 | 190 |
| 6. Public Health College | 18 | 56 |
| 7. Theological College | | 13 |
| Total | 403 | 883 |

In order to get a complete picture of the academically trained people it is necessary to take into account not only the students graduated in the country, but the Ethiopian students abroad, too.

### Returned Graduates up to August 1953 (E.C.) and Students Studying Abroad

| Field of Study | Returned | Studying |
|---|---|---|
| 1. Social Sciences | 343 | 201 |
| 2. Engineering | 197 | 180 |
| 3. Medical Sciences | 109 | 166 |
| 4. Agriculture | 165 | 138 |
| 5. Education | 169 | 148 |
| 6. Humanities | 21 | 85 |
| 7. Natural Sciences | 35 | 5 |
| 8. Fine Arts | 47 | 39 |
| 9. Others | 15 | 17 |
| Total | 1,101 | 979 |

It may be noticed that in the existing pattern of higher education, more emphasis is laid on the academic type of higher education. Thus both the graduates abroad and those studying at home in the field of Fine Arts and Social Sciences and other nontheoretical subjects, constitue about 40 per cent of the total number.

## Educational Targets 1955 - 1959

9. The development targets set forth for various economic and social activities in the Second Five Year Plan demand a large increase in the number of qualified personnel and technical manpower in particular. Of some 1833 university graduates required, about 800 are to staff the expanding social services and Government administration, and 1,033 are to meet the growing needs of expanding industry and other economic activities. In addition, some 11,700 technicians and employees with completed secondary level of education will be needed to fill the new jobs that the anticipated economic development will create, and to secure the successful implementation of the production targets of the Second Plan it will be necessary to have 900 more highly skilled, 2,700 skilled and 29,500 semi-skilled workers for the new industrial plants, modern large farms, expanding activities of construction, transport and communications, trade, etc. If these objectives are expended to bring about only the indispensable progress which has to be made towards the reduction of the very high

proportion of illiterate people and the provision of a primary general education to the extent needed for the whole educational system to operate successfully, then the magnitude and complexity of the tasks in the field of education become evident.

10. Both because of the shortage of qualified personnel who can assume teaching responsibilities in various educational fields, and of limited material and financial resources on a nation-wide scale, it is obvious that the above mentioned targets can be accomplished only through a very carefully designed educational policy. A selection of priorities has to be made with regard to various aspects of the educational system, such as the types of education, the content of the educational program, the methods of vocational training, financing, etc. The following are the basic principles which have to underlie the necessary adjustments and elaborations of the existing educational system in Ethiopia.

(1) the educational system in Ethiopia has to emphasize strongly the priority of technical education, taken in a broad sense, and thus supply the ever growing needs for technical manpower and qualified personnel in industry, agriculture, and other economic activities, as well as for the social services and administration;

(2) general academic education, instead of being excessively developed in comparison to technical education, retarding the speed at which the latter might develop, has to be properly balanced in order to become a necessary link in the educational system, and thus contribute fully to the advancement of national economy;

(3) the length of studies, hours of work and the educational programs must be adjusted to ensure the fastest turnout of qualified personnel with the desired educational levels and standards;

(4) the various forms of vocational training which are most suitable for fast and efficient training of skilled and semiskilled manpower to meet the demand of the growing economy, must be given fullest attention, applied on as large scale as possible, and organized with regard to timing;

(5) in financing this comprehensive educational program the principle of a most efficient use of the available material resources and the teaching staff must be strictly adhered to, inducing the communities and local population to contribute money, materials and voluntary labor for constructing school buildings, generally supplemented by Government assistance in money and materials. This will have to be organized on as large a scale as possible.

11. Primary Education (Grades 1 - 6). The low ratio of enrolment to the total number of school-age children from 5 to 14 is no doubt a very strong argument in favor of rapidly expanding primary education. Primary general education provides not only the possibility of obtaining the necessary personnel and experts of higher levels of education, but supplies also a prerequisite background that enables the unskilled manpower to acquire new technical knowledge with less difficulty and to adapt them-

selves faster to the requirements of modern industrial and agricultural work. Nevertheless, a certain limit must be set to the possible extension of primary education having regard to the scarce resources and the need of developing technical education in particular.

12. Due to a lack of teachers in the first place, primary education in this stage will have to extend over only six years. The question of school duration has to be considered in the light of the present high rate of fall-out of pupils in the primary schools. The number of pupils, for example, enrolled in 1945 and 1946 in the first grade was reduced in the eighth grade to as low as 18 and 15 per cent respectively of the enrolment. This is an immense wastage, and by slightly shortening the duration of school, together with other measures, including necessary legislation, it is expected that the turnout of the primary schools will be increased and the quality of teaching improved.

13. To enable the system of general education to impart more technical knowledge and skill and thus increase the productive capacities of those who will seek employment after leaving the primary schools, as well as to contribute to the advancement of production and level of living in the countryside, it is necessary to introduce more technical education and vocational training into the curriculum of primary schools. In addition to teaching the boys various crafts by organising school work-shops and teaching the girls home economics, it is of particular importance to teach and train the rural school children practically in the new methods of farming. The abundance of arable land makes it possible to establish school gardens which should be cultivated by the teachers and pupils in accordance with the needs of development of the respective regions. In these gardens fruit and vegetables could be cultivated and various simple experiments carried out to raise the most appropriate plants. Afforestation is also an important activity in which school children should take part, wherever possible. Full advantage has to be taken of the fact that the primary schools are scattered all over the country so that they can become, particularly in the remote areas, the very centers for dissemination of knowledge on the more advanced forms of life, especially by proving the advantages of education in those fields in which the population is materially directly interested. To enable teachers to carry out these complex tasks, the approximate Government Agencies will have to organize supplementary training courses for the teaching personnel, provide necessary literature, engage instructors, etc. The whole program will have to be fully co-ordinated with the National Community Development Scheme.

14. The program for primary education envisages that the number of pupils in the Government schools will increase from 180,533 in 1954, to 275,900 in 1959 or by 53 per cent. In the same period the number of classrooms will have to increase by 50 per cent, i.e. from 4,254 to 6,304 in 1959, which will mean a slight increase in the number of pupils for each classroom. Taking into account the estimated activity of the non-Government schools that follow the official curriculum, the number of

enrolled pupils will increase from 229.933 in 1954, to 331,100 in 1959 or by 44 per cent. Taking into account also the Educational Progam of the Ethiopian Orthodox Church the rate of illiteracy should become much lower by 1959.

15. It is estimated that the total number of classrooms in the secondary schools will increase from 1,010 in 1954 to 1,435 in 1959, or by 43 per cent, while the number of pupils will rise from 29,331 to 40,450, or by 38 per cent. The number of pupils in the Government schools is estimated in 1959 at 88 per cent of the total. As the principal role of academic secondary schools is to supply future students for advanced education in the institutions of higher learning, the increase of the number of pupils in this type of secondary schools must be kept within the requirements of the higher educational institutions; their number in 1959 is estimated at 29,450 or 73 per cent of the total number of pupils in the Government and non-Government secondary schools together, i.e. 27 per cent of pupils will be taught in specialized schools, technical, agricultural, commercial, medical, veterinary, teacher-training and administrative colleges.

16. In order to meet the demand of the growing economic and social activities, it is estimated that over the next five years the special secondary schools will have to turn out the following number of secondary-level specialists: technicians 1,550, agricultural and forestry technicians 927, veterinary technicians 402, school teachers 2,500, commercialists 1,340, other skills (clerks, etc.) 4,980.

17. The rather large expansion of primary education will demand an adequate increase in the number of primary school teachers. The provision of facilities to train them at the secondary level therefore deserves full attention. As the emphasis in secondary schooling has so far been on the academic and general, rather than on technical and specialized education, efforts should be made to organize suitable courses for additional training, and thus help to meet the urgent needs for school teachers. In a similar manner, special courses for training these people in various secondary-level skills such as bookkeepers, clerks, medical assistants, and even technicians should be organized.

18. Many of the specialized secondary schools do not exist at present. Concerted efforts and well planned activity of the Ministry of Education will therefore be needed to enable the new schools to start on time so as to be able to train the required personnel in the course of the Second Plan. It has to be borne in mind that besides skilled operators, the requirements for secondary level skills will grow the fastest. Moreover, the national educational system has to provide training for a sufficient number of this type of personnel, since it will not be possible to rely upon external recruitment. It is a favorable circumstance that most of the big projects, in industry in particular, which will have to be built under the Second Plan, are to be completed in the second half of the plan period. In this way there will be sufficient time to establish

and organize the proper functioning of the new schools and to adjust the output of the secondary-level skills to the rising demand for them.

19. **Higher Education**. - In considering the main lines along which the higher education will have to develop, two aspects of the problem appear particularly important. Firstly, higher education has to supply personnel who are indispensable and of crucial significance to the advancement of economy and society as a whole. Secondly, at present there is a number of foreign experts who make up for the lack of domestic personnel. No doubt the prospects of an accelerated economic and social development in Ethiopia will demand ever more highly qualified personnel, and the normal tendency is that Ethiopians will gradually occupy the responsible jobs in all walks of economic and social life where high skills are a sine qua non for a successful accomplishment of the assumed duties.

20. The estimates made on the basis of the planned expansion of the economic and social activities show that over the next five years the following number of graduates from the institutions of higher learning will be required: 160 mechanical engineers, 107 electrical engineers, 129 chemical engineers, 156 civil engineers, 470 economists, 35 veterinarians, 175 agricultural engineers, 20 mining engineers, 8 forestry engineers, 100 physicians and 473 other graduates. The Second Plan therefore accords priority to science, technical, and public health university education.

Enrolment in the Institutions of Higher Learning 1953-1959

| Faculties | 1953 | 1954 | 1959 | Index (1959/1954) | Rate of Growth |
|---|---|---|---|---|---|
| 1. Faculty of Arts | 308) | 466 | 500) | 150 | 8,5 |
| 2. Faculty of Science | 97) |  | 200) |  |  |
| 3. Engineering College | 128 | 146 | 230 | 158 | 9,5 |
| 4. Building College | 91 | 111 | 160 | 145 | 6,6 |
| 5. Agricultural College | 190 | 195 | 300 | 154 | 9,0 |
| 6. Public Health College | 56 | 46 | 150 | 326 | 26,7 |
| 7. Theological College | 13 | 14 | 20 | 143 | 7,4 |
| Total | 883 | 978 | 1,560 | 160 | 9,7 |

21. All the facilities cannot be provided to enable the domestic higher learning institutions to satisfy the requirements for a high education level personnel. It will be necessary, therefore, to continue sending students for study abroad and to this end, besides the resources the Ethiopian Government will set aside, more assistance in the form of scholarships will have to be sought from foreign friendly countries. However, a program for studying abroad to meet the country's actual needs will have

will have to be worked out and used as a basis for the organization of studies in foreign countries.

22. There still remains the serious problem of providing sufficient and suitably qualified university professors for the existing faculties and colleges, and for those which have yet to be established. The recruitment of teachers from abroad would undoubtedly be of benefit. There are also considerable possibilities of recruiting part-time teachers from among the experts already present in Ethiopia, who are employed in various technical and other fields.

23. Vocational Training. --The implementation of the production targets in industry, agriculture, and other economic branches depends to such an extent on the supply of required skilled operators that most serious consideration should be given to this problem. The approaches will have to be different depending on whether the needs of the already existing, or of the new establishments, are in question.

24. The training of skilled or semiskilled operatives needed for the expansion of the existing industrial plants and other establishments will have to adopt such forms as the apprenticeship scheme and on-the-job training, which have already proved to be the most efficient methods for developing specific skills. Larger enterprises should organize training courses in which engineers and other personnel of higher skill levels would extend the theoretical and practical knowledge of the employed workers. These establishments will also have to train the workers who will work in the newly built plants designed for similar production. In places where there is a higher concentration of workers, regular evening classes will have to be organized for various skills, to provide the trained workers with certificates of the skill levels they have acquired, thus stimulating among the workers a desire for advancement and promotion. In this manner full advantage may be taken of the existing engineering and other technical staff by employing them as part-time teachers in the evening classes.

25. Many of the industrial projects which are to be erected under the Second Plan belong to new lines of production (metal working, chemical industry, etc.), which calls for development of new skills among the workers. To cope successfully with this problem and to meet the demand for various skills it will be necessary to organize, in advance, special training centers, and to provide them with the necessary facilities. In some cases it will be necessary to send the workers abroad for several months of on-the-job training. To ensure the required financial means for this purpose, the plans for financing these investment projects will necessarily have to include the amounts needed for special vocational trainin

26. Action Against Illiteracy. - The campaign which the Ministry of Education has launched against illiteracy will have to be further strengthened and expanded. The active participation of educated citizens is a factor which can substantially broaden the scope of the campaign and greatly speed up the pace of reducing the existing high rate of illiterate people in Ethiopia.

27. Adult Education. - Many human, political, social, and economic reasons suggest that it is essential to extend the scope of education to those who did not have an opportunity to attend school regularly. Therefore an adult education program should be encouraged, broadened, and undertaken on a larger scale. The present number of teachers trained for this program is quite inadequate. This number should be increased and the task of these teachers should be clearly defined, to avoid duplication of work and waste of resources. The curriculum for adult education must be made suitable to those attending. Beside this more formal education of the adults, it will be useful to introduce special programs of educational lectures to extend mass education. It is also important to popularize evening classes in urban areas wherever facilties for this exist. The services of part-time teachers should be utilized through a proper campaign and appeal to the intellectual class. The program of the Mobile School, which is on an experimental stage at present, should be extended and promoted.

28. Financing. - The comprehensiveness of the educational program that has to be undertaken during the Second Plan calls for extreme economy in handling the financial aspect. Every effort has to be made to exploit all possibilities of reducing the costs of education, both on the current and capital account. The construction of modest and low-cost standardized buildings has to be the guiding principle. Introduction of two shifts is a useful device for keeping the construction of new buildings within the most economical limits. The premises already existing can be used for more than one educational activity (evening classes, special vocational courses, adult educational classes, etc.) In rural areas there is an opportunity for mobilizing local initiative to contribute voluntary work, supply of materials, etc., both in building village schools and equipping them with furniture.

29. The national budget for the Second Five Year Plan has allotted to the primary and secondary Government schools (including special schools) Eth.$ 118.1 million. Out of this, Eth.$ 106.3 million has been assigned for current expenditure while Eth.$ 11.8 million is for capital expenditure. It is also foreseen that Eth.$ 39.3 million will be allotted to the institutions for higher education. Out of this, Eth.$ 24.3 million will have to provide the current expenditures, and Eth.$ 7,0 million the capital expenditures of the Haile Selassie I University. The remaining amount of Eth.$ 8.0 million is reserved for grants to Ethiopian students abroad. In addition, it is expected that Eth.$ 8,0 million of foreign financial resources will be used to cover the expenditure of the Haile Selassie I University. As has already been pointed out, the financial means for training and retraining workers for industrial establishments in the new lines of production will have to be provided within the outlays envisaged for the respective projects.

30. Organization. - The educational development targets for the next five years set forth in the previous paragraphs are very extensive. Without an efficient, well organized, adequately staffed and qualified

personnel, the Government machinery will not be in a position successfully to implement the numerous tasks in the field of education. The Ministry of Education will have to play a vital role in the implementation of the whole program. Among the more important tasks that the Ministry will have to deal with, are the following:

(i) To organize necessary research and studies with the aim of further elaborating the educational system so that it will best suit the needs of the socio-economic development of Ethiopia.

(ii) In collaboration with other Ministries, to study and further elaborate the curricula of the educational program of various institutions, so as to make them into increasingly efficient instruments for enlarging the Nation's human productive resources.

(iii) To co-ordinate the activities of all the educational institutions, particularly the non-Government institutions and carry out necessary inspection.

(iv) To organize, in collaboration with other Ministries, the planning of vocational training for workers and to supply the necessary financial and technical assistance, as well as literature, instructions, etc.

(v) To initiate, supervise, and assist the nation-wide adult educational program.

## Culture

31. Cultural activities form an indispensable part of a general educational policy. In Ethiopia, where the lack of numerous facilities, especially teachers, limits the possibilities of extensive education for the masses, various cultural activities become even more important instruments of the national educational policy. Different forms of mass media of communications, such as broadcasting, the press, films, books, and other printed material, seminars and lectures as well as exhibitions and museums, offer ample possibilities for increasing the educational and cultural level of all sections of the population. The desire for more knowledge and wider cultural vistas has to be even more stimulated and utilized with the aim of shortening the period within which the existing wide gap in the cultural and educational level will be bridged. That is a long-term endeavor, but the fundamental requirements are easily recognized and they dictate the immediate tasks. Thus, the program over the next five years will have to lay emphasis on those activities that are most efficient in spreading mass education, as well as on strengthening the national consciousness and zeal of the population throughout the country to enable them to contribute their full share to the rapid advancement of Ethiopia.

32. Broadcasting should be granted one of the highest priorities. Its advantage is in the fact that it can be efficiently used, by an appropriate arrangement of the programs in various languages, to raise the educational levels of all sections of the population, the illiterates in

particular, not to mention the invaluable help radio service offers in welding national coherence and deepening the sense of people's unity. The Second Five Year Plan will have to mark substantial progress towards the establishment of a well developed broadcasting service in the country. It is planned that from the present two-hour daily radio service, the Addis Ababa radio service will by 1959 broadcast regular 18-hour daily programs. In order to provide an adequate coverage, it is foreseen that besides building a 100 kW medium-wave broadcasting station in Addis Ababa, a network of transmitting stations located in each of the seven Provinces will be established. In addition, a 100 kW short-wave transmitting station will be built in Addis Ababa for international service. This expansion of the radio-network will have to be accompanied by a campaign in the villages to introduce, wherever possible, the most suitable forms of spreading listening facilities and habit (by public address systems, for example).

33. Films arouse much interest among the masses. It is envisaged that a certain number of documentary films, news-reels and film strips will be produced each year to be used more extensively for general educational purposes. They will be made in all principal local languages and mobile operators will take them into all parts of the country. In the field of modernizing the audio-visual activity an important step will be undertaken during the Second Plan period by establishing a television system in Addis Ababa and by starting the first experimental program.

34. Besides the broadcasting service, the press in general will have to be used more extensively for general educational purposes among literates than it has been so far. Editions of inexpensive booklets and pamphlets dealing with actual subjects in economics, agriculture, nutrition, child care, hygiene, etc., should become powerful means of communication and mass education. Special series dealing with the problems of the social and economic development of Ethiopia and the popularization of the Second Five Year Plan targets will in a large measure help the people to understand fully the necessity of embarking upon an accelerated overall economic development. They will also realize that the benefits which the present and future generations will enjoy are worth the efforts and sacrifices that have to be made at this stage of the country's development.

35. Ethiopia is very rich in historical monuments and archeological sites. This historical wealth is far from being explored and made accessible to all those interested in the study of ancient Ethiopian culture. The Nation should engage more in the discoveries of its own rich past and also seek all possible assistance that can be extended by friendly foreign countries and relevant institutions. There is also a great need to organize protection of the existing historical monuments and archeological sites and to start the necessary conservation work. This service will have to be organized by the National Museum which could also enlarge its collections in this way.

36. For financing the aforementioned program of cultural activities in the Second Plan, a total of Eth.$ 4,84 million for capital expenditure and Eth.$ 20,2 million for recurrent expenditure is provided. Installations for the television system, the short-wave radio transmitter and the network of medium-wave transmitting stations, estimated to cost Eth.$ 3,5 million, will be supplied by foreign loans already secured. The remaining Eth.$ 1,38 million for capital expenditure, as well as the amount envisaged for recurrent expenditure, will be provided by the budget.

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## PUBLIC HEALTH

1. Public Health deserves to occupy a significant place in the framework of the social and economic development of the country for certain very important reasons. First of all, properly organized public health services are a precondition for physically strenghtening the Nation, and they are one of the cornerstones of the whole edifice of a consistent and wholesome social life. In the field of economic activity they play an important role as creators of a healthy and efficient labor force without which economic development is not possible. Although they cannot be considered as a part of personal consumption in the true sense of the word, still they are a significant component of the standard of living. For all these reasons public health services should be given adequate consideration in the Second Five Year Plan while the existing public health policy, which stresses the establishment of decentralized health services, with particular emphasis on the prevention of disease, has to be continued and even more accentuated.

### Recent Trends

2. Public Health services have achieved considerable progress in the course of the First Five Year Plan. Hospitals with a total of 300 beds have been established at Dessie in Wollo Province, Makelle in Tigre Province, Harrar and Dire Dawa in Harrar Province, as well as the Ethio-Swedish Pediatric Hospital in Addis Ababa. In addition to this, 50 health centers and 108 health stations have been established throughout the Empire. The number of hospital beds has been increased by 5 per cent and the health stations by 35 per cent. A total of 750 dressers were trained and certificated during the last five years. In the five Nurse Training Schools 182 nurses completed their studies, and 27 physicians and 3 pharamcists obtained their degree in various universities abroad and returned to Ethiopia. Special courses were held for laboratory technicians in Gondar and Addis Ababa and they have provided the hospitals and public health institutions with 28 trained laboratory technicians. A number of X-ray technicians, health educators, hospital administrators, laboratory technicians, and fifty-five nurses and nurse-midwives were trained abroad and are available for the Ethiopian health service.

3. During the last five years important steps have been taken in the treatment and prevention of the main communicable diseases. The Malaria Eradication Project was started in 1949 and has expanded to an organization of 335 regular employees which protects about 800,000 people from malaria out of a total of approximately eight million who are menaced by this disease. Tuberculosis Control has been initiated as a special service with a demonstration and training center in Addis Ababa, and this center has trained 200 health workers; it has examined more than 100,000 people, and has had about 7,000 people under treatment.

In addition, a new hospital with 60 beds was established in Harrar. The Leprosy Control which was started before the First Five Year Plan has been extended throughout the Empire, has established four segregated villages in the Shoa and Arussi Provinces with a capacity of 2,000 inmates, and has trained 80 elementary dressers. The Venereal Disease Control has been continued throughout the said period, and mass campaigns were carried out in the Wollo, Shoa, Gojjam, and Wollega Provinces with a total of 250,000 persons treated. When yellow fever occurred unexpectedly in the southwestern Provinces about one million of the exposed population were vaccinated.

4. By increasing the number of hospital beds, extending the network of health institutions (hospitals, clinics, health centers, and health stations), and by attacking the most dangerous communicable diseases in the past five years, public health services have created a solid basis for further improvements and developments in the coming five-year period.

## Second Five Year Plan Objectives

5. Basic Principles.- In the Second Five Year Plan period Public Health should be given more priority than it has had so far. When expanding the public health services first priority should be given to preventive medicine. The numerous problems of national health cannot be solved merely by erecting hospitals. The first steps and the prior role in solving these problems should belong to preventive medicine, which is to forestall in time all the diseases which would later be much more difficult to treat, and be much more expensive. Efforts in this direction also lead to a decentralization of Public Health institutions to satisfy the needs and wishes of a larger number of the population. Preventive medicine is a pre-eminent social service, which does not only have a medical character, but also an educative and social one.

6. The network of pulbic health centers and stations should be expanded in the course of the Second Five Year Plan, and should be brought closer to the people. Eventually one health center should be established for at least each 50,000 people, and one health station for each 5,000. The present inadequate number of medical personnel, particularly physicians, who are at present concentrated in Addis Ababa and a few other hospital centers, is a handicap to decentralization. In order to surmount this difficulty it will be necessary to extend the training of medical personnel. It is essential to foresee in detail the functioning of the public health centers and stations, and to set before them precise and clear tasks, and it is especially important to establish a rational organization of health centers and to introduce strict medical discipline. Only in this manner is it possible to achieve a satisfactory medical standard and to realize the demands set by modern science in a decentralized network of health institutions.

7. While by no means neglecting the hospitals and their role in public health, preventive medical measures which are favorable for mass application must receive high priority. Parallel with them, health education of the population and a development of habits of personal and social hygiene should be carried on. It is necessary to elaborate consistently on the removal of the sources of contagious diseases and of making the settlements more sanitary. This must be carried on consistently not only in the places where there are health centers and stations, but also in the surrounding villages. Adequate attention must be devoted to hygienic nutrition and the composition of the diet, as well as to other measures which are directed toward the strenghtening of the human constitution and lowering the death rate. Maternity and pediatric services should be adapted to local conditions with the aim of decreasing infant mortality,and of achieving more rational human reproduction.

8. The Public Health Program should be a mass program, efficient and as far as possible, inexpensive. It is, therefore, necessary to devote particular attention to the organization of health services and to adapting them to the needs and psychology of the local population. In this sense the Public Health Program must be a component of a wider Community Development Program wich counts on the co-operation of the local community. The local health centers and stations have to be supervised by the Ministry of Public Health, which should provide adequate health standards. In the sphere of activity of the health centers it is necessary, in co-operation with the Central Statistical Office, to begin to organize vital and health statistics in order to obtain the statistical data indispensable for research and policy making.

9. The hospital facilities have to be improved in the course of the Second Five Year Plan so as to providè the following number of beds and the main medical personnel:

Hospital Facilities

| Number of | 1954 | 1959 | Index |
|---|---|---|---|
| Beds | 7 681 | 9 900 | 129 |
| Physicians | 227 | 294 | 130 |
| Nurses | 344 | 528 | 153 |
| Advanced Dressers | 356 | 682 | 192 |
| Elementary Dressers | 669 | 1 153 | 172 |

10. This extension of hospital facilities has to be achieved by enlarging the capacities of the existing hospitals and by erecting new hospitals. The existing hospitals in Addis Ababa, which at present have 2,066 beds, have to be upgraded, and the number of beds should be increased to 3,000 within five years. The capacity of the existing hospitals in the provinces, which have 1,419 beds, will have to be increased to 2,000 beds by the end of the Second Five Year Plan.

11. In addition to this enlarging of the existing hospitals, four new hospitals will have to be established:

(i) A hospital and orphanage with a capacity for 1,000 leprosy patients who require hospital treatment, as well as for ambulatory treatment of more than 20,000 leprosy patients, 20,000 patients suffering from skin diseases, and to shelter 60 orphans;

(ii) An infectious diseases hospital with 40 beds, whose task will be to control epidemic endemic diseases and treat infectious patients who have to be isolated;

(iii) A tuberculosis hospital with a capacity of 100 beds for adults and 25 beds for children for the hospitalization of tuberculosis cases;

(iv) The Duke of Harrar Memorial Hospital in Addis Ababa with 500 beds, which must have departments for surgery, gynaecology, X-ray therapy, internal medicine, an eye ward, an Ear, Nose, and Throat ward, a pediatric section, and out-patient clinics with a capacity of 1,000 patients daily. At the same time it will have to serve as a teaching hospital of adequate standard. It should be established in two stages; the first stage should be completed within the Second Five Year Plan, while the second should be carried over to the Third Five Year Plan. If this is not done it will not be possible to carry out the plan of improving the public health services in the Provinces, the state of which is poor compared with the standard of the same services in Addis Ababa.

12. The above expansion of the hospital facilities does not cover the whole field of public health services. It concerns only those hospitals which are under the direct supervision of the Ministry of Public Health. The Ministry of Interior, which is still entrusted with a certain part of the public health services, will extend its network of hospitals and clinics by about 300 new beds. Furthermore, it is to be expected that some improvements will be made in the existing 27 private and missionary hospitals and the 115 private and missionary clinics which have about 1,700 beds.

13. Other Facilities.- In order to meet the main requirements and tasks in the field of treatment and prevention of the main communicable diseases the following concrete measures will have to be undertaken during the Second Five Year Plan:-

(i) Since more than eight million inhabitants in Ethiopia are exposed to malaria, which undoubtedly killed more human beings than all the other diseases combined, the Malaria Eradication Project has to be developed to cover about eight million of the population exposed to malaria. The Malaria Eradication Training Center has to be strengthened to train a staff for malaria control, to reach 75 candidates yearly during the Five Year Period.

(ii) After the epidemic outbreak of yellow fever in 1951 (E.C.) a large number of the population is in danger of contracting this disease. Since only about one million people have been protected by vaccination and control measures, vaccination should be continued in the coming years in order to avoid a further spread of the deadly disease. About three million of the population should be vaccinated at once but vaccination should be extended in time and to as large a number of people as is necessary. To support and make possible this important undertaking, a yellow fever vaccine production plant should be established with a capacity of four to five million doses a year.

(iii) During the last five years an increasing number of active tuberculosis cases have been reported throughout the country, which indicates a progressive extension of the disease. An efficient control of this malady requires the following:

- A Mobile X-ray Unit with vehicles, including a laboratory, should be attached to the TB Control Project for epidemiologic survey on TB, beginning in 1955 and continuing throughout the whole Five Year Period.
- A new hospital with 125 beds should be opened.
- BCG vaccination should be continued and extended to all parts of the country, regardless of how remote the areas might be.
- Regional TB Centers for diagnosing and treating large numbers of patients should be established in certain Provinces. The first will have to be established in Jimma, Dessie, Irgalem, and Soddu.
- TB control measures should to be integrated into the basic health services, because in order to bring this disease under control, the struggle against TB will have to be carried on during a long period.

(iv) The leprosy control which is at present based on a country-wide system of outpatient centers, should be executed mainly through the health centers.

The immediate objective should be to reduce the incidence of leprosy by providing adequate treatment facilities, to train a sufficient number of auxiliary staff, and to educate the public in order to prepare the ground for the extension of work in leprosy control.

(v) The quarantine service should be established in accordance with international regulations. Improvements should be made especially at the international airports in Addis Ababa, Asmara, Dire Dawa, and Jimma.

(vi) In order to reduce the present high infant mortality, the executives of the public health services should take the following measures:

- Expectant mothers must be cared for by the health centers. They must be checked carefully during pregnancy and necessary measures undertaken to assure a safe and normal delivery.

- The health centers staff should assist in parturition, preferably in the home, but if complications are expected the assistance should be given in the health centers.

- Postnatal care must be effected by the health center staff in order to see that the mothers are giving the best possible care to their children. By organizing mothers' classes, which should be organized for all the mothers of the community, the health center staff should teach the mothers the principles of good maternal and child health, proper nutrition, and other related subjects.

- Good baby clinics and home visiting follow-up should be important features of the maternal and child health services operated by the health centers.

## Financing

14. In order to finance all the planned public health services under the supervision of the Ministry of Public Health, an amount of Eth.$180.9 million has to be allotted to the Ministry's five-year budget. The Central Treasury has to provide the Ministry with Eth.$114.3 million, out of which Eth.$94.6 million is to cover the recurrent costs, while Eth.$19.7 million is for capital expenditure. In addition, foreign sources are expected to contribute Eth.$42.4 million for the recurrent costs, and Eth.$19.2 million for capital expenditure.

15. It is necessary to point out that the population will be expected to support, on a voluntary basis, the improvement of public health services foreseen by the Second Five Year Plan. To establish the Duke of Harrar Memorial Hospital the contribution of the people will amount to over Eth.$5 million. However, other projects and public health undertakings could also be supported by the population and communities, especially when contributions in kind are in question.

Organization

16. In order to improve the Public Health Service on a nation-wide scale, the following organizational and administrative measures will have to be undertaken:

(i) The existing health legislation sets up the Ministry of Public Health as a regulating agency of all the health activities in the Empire. The weaknesses which are caused by certain shortcomings have to be remedied by revised health legislation which must necessarily ensure that the Ministry of Public Health is the sole co-ordinating agency of Medical Service in the Empire. This will ensure a uniform standardization and avoid duplication of services, which could otherwise result in inadequate planning, and in unfair competition in the employment of professional and auxiliary personnel etc.

(ii) Provincial Public Health Departments should be established in all the Provinces. Each Provincial Health Department will be responsible for the administration and servicing of all the hospitals, health centers, and health stations within the Province. It must have at its disposal a well equipped central laboratory, in order to perform the necessary public health examinations and tests, and a medical supply depot.

(iii) The Public Health Demonstration and Evaluation Project should provide, on the basis of studies in selected areas, information concerning the effect of the average health center program in Ethiopia in respect to reduction in the infant mortality rate, improvement in sanitation of the environment, changes in attitudes toward health practices, and other factors under study. It should demonstrate the effect of optimal supervision concerning the work of one of the health centers in the study group in order to determine whether the added expenditure of time, efforts, and money that are necessary for this supervision are warranted. This project should include the training of a team of health personnel in techniques of evaluative research. The project will have to continue its activities over the whole period of the Second Five Year Plan.

(iv) The health center staff must be advised and guided, when establishing an integrated health service on a local level, by a supervisory team for health centers, consisting of a public health officer, a sanitary engineer and a public health nurse-midwife. The team has to make sure that the activities of the health centers are properly co-ordinated in the provincial and other health services, and elsewhere in the general community development schemes, and that their services are utilized in such a way as to provide maximum benefit to the population. This project is important in order to supervise the newly established basic health services, and it will be needed until all the provincial public health administration departments are fully established.

( v ) The out-patient treatment in the rural areas without medical facilities, especially in emergencies, and the survey which will be required for improvements in different aspects of the public health services, should be carried on by a clinomobile service. This service has also to play a significant role in the health education of the public.

17. For the private practicioners already established no special arrangements or restrictions should be made, but the Ministry of Public Health shoud set up minimum standards. For subsequent applicants, the areas of need have to be indicated by the Ministry. In the case of epidemics and emergencies the Ministry expects co-operation of the practicioners with the local health authorities as is stipulated in the health legislation.

## Chapter 19

## EMPLOYMENT

1. According to the number of inhabitants even, though she ranks among the largest countries in Africa Ethiopia is not densely populated. This fact has manifold economic significance, particularly in respect to labor availability. It is necessary to note that Ethiopia has at her disposal a relatively large reserve of manpower. In spite of the low density of population the labor force cannot by any means be treated as a scarce factor in economic development. On the contrary, manpower is one of the most abundant factors to be used to accelerate economic progress.

2. The fact that a large part of the people earn their living from agriculture is the fundamental characteristic of the economic and social structure of the Ethiopian population. According to an estimate which was made in 1954 the agricultural population constitutes 90 per cent of the total population. Its share in the active population is even larger. Out of the total of 11.2 million active population, 10.4 million or 93 per cent are employed in agriculture. This indicates the great reserves of manpower which could become the most important factor of economic development. It is a well known fact that economic progress changes the economic structure of the population by reducing the portion of the agricultural population and increasing the nonagricultural one. These changes are the result and a condition of economic development, but are of a long-term nature, therefore all the benefits to be derived from the changes in the economic structure of the labor force are not to be expected in the course of the Second Five-Year Plan period.

3. The change in the economic structure of the population is linked with industrialization and caused by the accelerated development of other nonagricultural activities. The forthcoming five-year period presents a basic phase of a long-term process of economic development, and therefore it cannot bring about essential changes in the composition of the labor force. During this period the long-term process experiences its maximum acceleration in an economic sense, as well as in respect to employment. In connection with this, the labor force as it is and as it will become during the coming five years, should participate as much as possible in agriculture, but should also prepare for the development of those sectors which, according to the Second Five Year Plan, are of a propulsive character.

### The Agricultural Labor Force

4. One of the important tasks of the Second Five Year Plan is to utilize more fully the manpower in agriculture while keeping to a minimum any transfer to other activities. This must be accomplished by applying three different methods (i) by intensifying agricultural production on the small farms, (ii) by utilizing agricultural manpower from time to time on local and regional public works and (iii) by

developing large-scale commercial farms. By applying these methods the agricultural labor force will become a significant factor in the acceleration of the total economic development of the country even during the coming five-year period.

5. Labor Force on the Small Farms - Better utilization of agricultural labor on the small family farms depends to a large extent on the synchronization of the measures applied to promote agricultural production on a wide scale, i.e., on the modernization of agriculture in the small-farm sector. The intensification of human labor in agriculture should be assisted by introducing more intensive cultures in those parts of the country which have a favorable climate for cultivation, by supplying better seeds, and particularly by introducing modern agricultural methods. Agricultural labor when engaged on a large scale is inseparable from the process of advancing agricultural production, and intensive utilization of agricultural manpower in agriculture presents an integral part of the measures needed for modernizing agriculture. All the agencies concerned should therefore devote attention to this development process, viz., the Agricultural Extension Service, the Community Development Program, the Veterinary Service, and others. The utilization of improved tools and techniques in agriculture demands, inter alia adequate training of manpower. The farmer will have to master new technical methods so that their use will result in increased and better production. The success of these operations depends in a large measure on the way in which know-how is spread and how the improved tools and implements are used. In this respect an important role will be given to the various projects which will promote production and at the same time instruct the farmers to handle the up-to-date agricultural implements. It is necessary to begin to organize these projects as soon as possible, so that the results in the intensive use of the labor force will be achieved in the coming five-year period. Priority in training agricultural manpower should be given to those regions which are expected to contribute most to the increase of agricultural production.

6. Public Works on a large and labor-intensive scale of national, regional, and local character are a very efficient method of additional employment of the rural manpower. This method is well known in many countries and has produced very encouraging effects in many respects. Work carried out by inexpensive rural labor should be extended to the construction of roads, schools, hospitals, local water supply, soil amelioration projects, afforestation, etc. The benefits of this kind of infrastructural work and of other similar investment projects are manifold. It must be primarily pointed out that supplementary employment of the population is thus being realized, and that capital, as a scarce factor in economic development will be partly substituted by labor, whereby the major part of investment works will increase. In this way projects needed for the development of education, public health, local transport, water supply, etc. will be carried out in the most inexpensive manner. In addition, the boundaries of the domestic market will be extended and contribution will be made to the process of monetizing subsistence agriculture. In some cases, particularly in road construction,

this method will contribute to a saving on imports of expensive equipment. Supplementary employment of the rural population also contributes to an increase in the labor efficiency of the people by introducing new knowledge, which also has positive psychological effects. This is a very important consequence of the labor intensive schemes, which may bring future employment to rural manpower in industry and other nonagricultural activities.

7. Large-Scale Farming.- The establishment of modern large-scale farms which is anticipated by the Second Five Year Plan will require that the additional employment be adjusted to up-to-date and mechanized farming. This kind of employment completely differs from employment on the small farms of a family type. Due to its organization and division of work, equipment as well as skill are needed. It has been estimated that during the next five year period total employment in this sector will increase by about 4,600 people or 3.5 times as many as in 1954. The increase in managerial, administrative, technical, and supervisory personnel is estimated at 1,400, while the labor force is estimated to rise by 3,200.

8. It is expected that the technical personnel as well as the supervisors will be recruited from the graduates of the existing agricultural college and the secondary schools, and the administrative personnel from among other high and secondary school graduates. To train and provide experience to this personnel, facilities should be provided by the existing large agricultural undertakings in practical work and managerial training. In addition, the Bahar Dar Technical School will provide technicians who are needed to operate and maintain the agricultural machines. As to the agricultural workers and particularly the tractor-drivers, machine operatives, maintainance personnel, and others, they will have to be trained on the existing large farms and in the technical school. Special training courses will also have to be organized for other kinds of laborers needed for large-scale farming.

## Nonagricultural Employment

9. Due to the growth of the nonagricultural sector in the course of the Second Five Year Plan, particularly the directly productive industries and social services, nonagricultural employment is expected to increase much faster than it did during the First Plan period. Owing to the lack of employment statistics, the total estimate of nonagricultural employment growth has not been worked out, and in particular the increase of employment in the unorganized sector of the national economy, small trade, catering, small-scale building and construction, personal services, etc. have not been assessed. However, the growth of workers and employees in the organized sector had been estimated within the framework of the elaboration of technical-economic studies. This is, in fact, the most important section of new employment because it has to carry on the most responsible tasks with regard to economic and social development.

10. During the 1954 - 1959 period the number of persons employed

in the manufacturing industry, mining, electricity, and financial intermediaries should double. The largest increase of employment is expected in the manufacturing industry, which presents the most propulsive sector for creating new employment opportunities. However, although it is relatively very large, the increase of employment in this sector is modest in comparison with the total increase of employment in the course of the next five years, which will amount to about 34,000 people, or 3.4 per cent of the total active population.

11. The new employment which will be created during the coming five years in mining, power, manufacturing, and financial intermediaries can be occupied only by persons who possess adequate qualifications. The character of the qualifications and the jobs in these activities, as well as the economic results which are anticipated, do not permit that success be jeopardised by the use of inadequate manpower. This refers equally to the administrative and technical personnel and to the workers. In the total of about 34,000 persons who will be employed in these activities there will be about 3,600 administrative and technical personnel, or about 11 per cent. The majority of the technical and administrative staff to be employed should come from technical and special secondary schools, colleges and universities. It is necessary for this personnel to be educated in time, so that a lack of personnel will not imperil the realization of the investment and other tasks in the respective activities. Of over 30,400 operatives and supervisors who will be employed in these activities, the majority will have to achieve certain skill previously while part will be able to train on the spot. Special attention will have to be devoted to the training and developing of foremen and supervisors on account of their roles in the functioning of the new industries. This large and difficult task will to a certain extent be facilitated by the fact that the majority of new employment is expected after the third plan year, therefore there is sufficient time to undertake the necessary measures for education and training.

12. Other Sectors. - It has been estimated that in the 1954 - 1959 period the increase of employment in other sectors of the economy, such as transport and communications, commerce, handicrafts, catering and tourism, will rise to 130,000 persons. These activities will develop mostly on the basis of private initiative, where small business occupies an outstanding place. This naturally facilitates the training of personnel for these activities, all the more so since the increase of employment will be spread throughout the country. It is a favorable circumstance also, that big enterprises like the railways, telecommunications, P.T.T. services, and large-scale catering will themselves be able to provide the necessary personnel on the basis of experience attained in former years and with the existing training facilities. Meanwhile, it will be necessary to devote full attention to employment in new building enterprises, especially in order to qualify, in the shortest possible time, graduates from the respective colleges to carry out larger-scale building, construction, and designing.

## Government and Social Service Employment

13. It is expected that the number of persons employed in the Government and Social Service institutions will increase by about 12,000, and that the largest increase of new employment will be in education and public health, considering the significance which is given to these activities in the coming five-year period. The expansion of employment in the Government institutions has to be very moderate and restricted, so that it does not cause an undesired increase in Government expenditure, and imperil the planned distribution of the gross national product, with adverse repercussions on the volume of investments and the pace of the economic development of the country.

14. The major part of the new employment will have to be covered by the existing secondary schools and the University. It is anticipated that the needs for primary school teachers and elementary medical personnel will be provided for by extended education. Much more attention will have to be devoted to the education of highly qualified Ethiopian personnel, especially professors and physicians, so that the number of foreign experts will not increase with the growth of those social services. Concerning public servants it is necessary to emphasize that although their number will increase only slightly, significant improvement must be accomplished in all sectors of the administration. It will therefore be necessary to encourage further training and education of the existing personnel, primarily by evening classes and special courses which should be continued at the University in agreement with the respective departments. In addition, all the Ministries and Government Agencies should organize in-service training and specialized courses for their personnel and base promotion on the knowledge and skill which can be achieved by these methods.

## Employment Policy and Training

15. It is necessary to emphasize that an adequate solution of the labor force problem is the key to the realization of the program of economic development of the country. The training of the newly employed officials and workers is therefore an extraordinarily important task, which at the same time is very complex. If a relatively easier and spontaneous process of training can be assumed for small businesses in commerce, handicrafts, catering, and to a certain extent transport, the same cannot be said for industry, mining, power, the organized agricultural sector, social services, and Government institutions. Here the participation of educated personnel in the anticipated new employment is relatively high. The whole school system must therefore be adapted to the needs of economic development in order to, in as short a time as possible, provide the necessary number of persons with adequate qualifications. This is the fundamental condition for achieving the planned targets of economic development and the only way in which economic development will rely upon domestic experts. It is, however, necessary to assume that in the course of the next five years the training of

personnel will fall behind the needs of economic development and the development of the social services. In addition, in the next five years Ethiopia will still have to depend on the aid of friendly countries in respect to qualified personnel. For this reason an efficient policy in the employment of foreign experts will have to be carried out, because they will be expected not only to execute current economic work but also to contribute to the training of Ethiopian personnel. In the forthcoming period the school system will have to secure domestic middle and highly qualified personnel, so that the need for foreign experts may be reduced, particularly in industry, mining, power supply, and agriculture. It is necessary also to insist upon higher training and efficiency of the domestic personnel as one of the fundamental tasks in the employment policy.

16. Recruiting and qualifying the workers who are needed for the new industries presents an important component in the implementation of the Second Five Year Plan. The employment policy in the course of the Second Plan cannot rely only on the systematic training of the young people for their future jobs, but has also to reckon with the employment of adult persons who do not have the necessary general and school qualifications, and whom it will be necessary to train for new jobs before employing them. Naturally, this is a handicap to all the new industries, the technology of which is not yet known in the country. This circumstance, however, does not imply that the Second Plan's tasks cannot be realized owing to a lack of skilled workers. Recent experience has shown that Ethiopian workers acquire skill in their new jobs very quickly, as has been proven in the textile industry in the operation of large agricultural machines, and in the footwear, sugar and other industries. In order to shorten as much as possible the time necessary to adapt the workers to the techniques and machinery, the new industrial enterprises will have to establish corresponding training facilities. Parallel with this the Second Five Year Plan has foreseen measures to be taken in order to instruct and train young workers regularly.

17. Special attention should be devoted to the training of young people in arts and handicrafts, those which will develop in the rural areas, as well as those which are of urban character. The village craftsmen should be instructed in those crafts which will develope after the introduction of improved tools and implements, better housing, water supply, etc. The program of National Community Development and Agricultural Extension Service will have to be adjusted to perform this task, because they will jointly have to influence the advancement of the village handicrafts. As for the town handicrafts, it will be necessary gradually to oblige the craftsmen to take young people as apprentices and instruct them in the various handicrafts, so that they may acquire necessary skill and knowledge through practical training and supplementary education. Apprenticeship should be one of the methods of systematically training and preparing a new labor force during youth, which is undoubtedly the best and most efficient way.

## Managerial and Technical Personnel

18. Economic development depends largely upon the possibility of providing a sufficient number of capable executives. It calls for a considerable number of talented organizers of production, whose capability cannot be achieved in any regular school. Managers of factories and other productional units are recruited from among persons of various school qualifications, and as a rule they are not trained but selected. This has been proven by practice in all countries. If the choice has been well made supplementary education should complete the detailed knowledge, for which it is necessary to utilize out-of-school methods. However, the selection of managers does not mean that it is not necessary to devote special attention to their creation in the schools. In the sphere of the university curriculum it is necessary to find a place for subjects which are necessary for executives in the economic development plan, whether for their higher training or supplementary education.

19. Selection of executive personnel is extraordinarily significant for the fulfilment of the Second Five Year Plan of Ethiopia. Its significance is a consequence of two opposite components: firstly, the requirements of economic development are relatively very large, and secondly, there are no ready-made executives, so that selection is limited to potentially capable executives who should be trained. Since the Government, as well as the private entrepreneurs, developes as a direct bearer of investments and economic development, its participation in selecting productional organizers and executives will be in proportion with its participation in financing economic development. In connection with this, it will be necessary to set up standards in selecting managers and other responsible executives in production.

20. Besides the administrative personnel it is necessary to secure a sufficient number of highly qualified technical personnel. Engineers and other experts have to organize the process and supervise production. It is estimated that during the 1954 - 1959 period the requirements of the economy and other activities for executive technical personnel will amount to about 300 persons. In order to qualify a sufficient number of capable executive technical personnel in time, any opportunities to send them to friendly countries for specialization will be taken, particularly for the new large projects within the range of the investment programs.

## Labor Legislation and Employment Exchange

21. Together with the economic development, labor legislation gains increasing significance, because more people are being employed and labor relations are becoming more complex, and consequently should be legally regulated. Steady employment is not only an up-to-date social demand but also a condition for achieving skill and qualification as

7

well as more efficient work. It is therefore necessary to enact laws which will regulate the rights and obligations of the workers and employers. Legislation should also create conditions for establishing a system of apprenticeship in order to create qualified manpower, as well as to protect the working youth.

22. Particular attention should be devoted to the establishment of employment exchange bureaus, because visible unemployment is spreading in recent years. In addition, the scarcity of qualified labor-technical operatives, as well as skilled workers, requires a better distribution of the available skills. Besides co-ordinating the planning of economic activities and education with a corresponding policy of granting scholarships for education abroad, the existing qualified labor force will have to be better utilized. The Government will therefore establish labor exchange bureaus whose task will be to study the causes of unemployment and the demands of labor, and to facilitate employment exchange. Labor exchange should not be considered as a measure of welfare policy, but as a means to advance economic development. This implies the co-ordination of the labor exchange with the development of various economic and social activities and the carrying out of studies and surveys which will facilitate the formulation of an employment policy.

# Chapter 20

## SOCIAL WELFARE

1. Social Security, housing conditions, local environment, and other services which contribute to the welfare of the population, form together the important components of the standard of living. The availability of the services concerned is closely associated with the level of economic development the country has attained. The need to improve all these aspects of life is very great, but the pace at which it is possible to proceed is basically determined by the speed at which the whole economy is able to expand. In the present stage of economic development in Ethiopia the standard of living as a whole should rise, so as to provide mainly for demographic changes, leaving also room for some increase on per capita basis. It means that the financial and other resources the Government will be able to engage for social welfare services are on a modest scale. However, with the policy of utilizing scarce resources in such a manner as to achieve the most desirable social results and with the maximum effort in the mobilization of all local resources as well as with the cooperation of voluntary organizations, it is expected that many achievements under the social welfare program can be expected even in the next five year period.

### Social Security

2. The Social Security Program is becoming more significant with the change of subsistence economy into monetary economy, and with the gradual disappearance of family organization of rural economy, yet this process has only recently begun, since at the beginning of the Second Five Year Plan not more than 210,000 workers and employees are employed. This is a very small population for calculating all social insurance risks; in addition the non-agricultural population is very heterogenous, with respect to its legal status and level and source of incomes. For this reason it is necessary to approach the introduction of a Social Security Program with caution and only after due research and studies are made.

3. The research and the implementation of the Social Security Scheme should be carried out in three directions : (i) for public servants, toward creating a Pension Fund on the basis of proportional payments by the Government and the employees; (ii) for workers and employees in public and private business, a Provident Fund scheme is recommended which should be created by the participation of both employers and employees in the business; (iii) for the professionals, businessmen and others, on a life insurance basis, in conformity with the principles on which the kind of insurance operates.

4. In a modern state social security is becoming one of the essential rights of man. Its introduction in Ethiopia is made difficult not only by a narrow demographic basis of those to be insured, but also by low personal incomes and limited possibilities for the Governments' financial share. Nevertheless, Social Security must by no means be left to chance or private interests. The Government should take the full responsibility,

because it is the only authority competent to lead the right policy in the field of social security in respect of both its social and financial aspects.

5. On August 31, 1961 (G.C.) the Public Servants' Pension Decree was adopted, providing rights and obligations in this respect. The current old age pension scheme should be financed from the current State revenue as foreseen by the 1955 Budget. The total amount provided for this purpose for the five year period is Eth.$ 12,096,000; this money is actually the State's contribution to the pension scheme, although it will be consumed over each current year.

6. The public servants' contribution is estimated to be 3 per cent of the total personal emolument per annum; this money should be allocated to the Public Servants' Pension Fund to yield the usual interest. It is envisaged that in this way the total amount to be directed to the Fund during the next five years will amount to Eth.$ 20,200,000. As a typical small saving scheme, the money provided for the Public Servants' Pension Fund will be used as a part of the Investment Fund for development purposes.

7. According to the Decree, the Government's contribution to the Fund would have to be larger by about Eth.$ 8 million. But owing to the great demand for funds needed for financing the development and other projects planned for the next five years, this payment will have to be postponed and actually effected in the years after 1960. As the current expenditure estimates of the old age pension scheme are very rough, should the actual expenditure be higher than estimated, the Government will have to cover the balance within the possibilities offered by saving on other budgetary expenses. If, on the contrary, the actual expenditure is smaller than forecast, then the difference will be transferred to the fund immediately.

8. A Government Agency which will deal with the organizational, financial and other questions related to the Public Servants' Pension Scheme should take care of other aspects of Social Security. This agency will have to undertake necessary research on the basis of which early legislation concerning the introduction of a compulsory Provident Fund for those employed in bigger public and private business will have to come forth. The agency will also encourage the life insurance scheme among professionals and businessmen.

## Housing and Urbanization

9. There is a lack of statistics to provide a basis for the proper assessment of the actual housing conditions in the country. Nevertheless the essence of the housing problem is well known and two major aspects of it should be pointed out, (1) the unsatisfactory standard of traditional rural housing, and (2) the socially unfavorable housing conditions in urban areas, affecting the middle class and particularly the poor sections of the urban population. Here only the housing problem of urban

areas will be tackled while the improvement of housing conditions in rural areas, which requires specific approaches, is dealt with within the community development program.

10. Urban housing has recently been improved, especially in Addis Ababa and other large towns, but there has been a tendency to build expensive dwellings of a high technical standard, so that housing absorbed a large part of the total investments without producing the desired social effects viz. the improvements of housing conditions of large sections of the urban population.

11. At this stage of economic development the Government is unable to solve housing problems by providing a great share in the financing of housing construction. However, housing conditions being one of the most essential components of the standard of living, the Government should intervene in this very vital field of the human life. Government policies have to become an important factor in the rational use of available funds, aiming at the improvement of the housing of people who need it most urgently. To this end the following main objectives are set out for the Second Five Year Plan period:

(1) Inexpensive housing projects must be encouraged and given the fullest support. A suitable credit policy has to help by giving priority in the supply of inexpensive credits to the low-cost housing scheme, undertaken in the first place by municipalities and cooperatives,

(2) The different Government Agencies must begin to work out technical norms and standard designs for a mass construction of moderate and low-cost healthy dwellings, taking into account the need for utilizing cheap, traditional materials which are locally available;

(3) for the accomodation of technical and expert staff in the nonurbanized area where new bigger state development projects are to be erected (ports, mines, pilot farms) the necessary funds for house construction will have to be provided by the Government;

(4) legislation and other regulating measures have to be introduced to help the development of building activity;

(5) the leasing relations between the landlords and tenants have to be prescribed by legislation in order to lay down clearly the rights and duties of both sides.

12. It has to be pointed out that the greater part of these funds will be spent on rural housing. From the Bank loans only Eth.$ 10 million are foreseen for housing, and this amount is reserved mainly for the construction of dwellings connected with the development projects. The investment policy should favor the construction of low-cost housing projects, which will, together with the regulation of the leasing relations, undoubtedly contribute to the easing of the present housing problems.

13. The growth of existing, and the creation of new urban centers that the economic development will bring about in the future, requires that due attention be paid to town planning. Within a broader framework of the regional development program, town planning in Ethiopia has to be concerned with a proper arrangement of urban area through the allocation of land for industrial, agricultural, residential, cultural and recreational purposes as well as with the development of communications, of the network of public utilities and other services. In this sense town planning constitutes an integral part of the national planning of economic and social development, and represents the only rational way of solving the complex problem of coordinating various activities and generating a healthy atmosphere in the life of the community.

14. To carry out all those tasks successfully in all municipalities, is obviously beyond the capacity of the material and human resources at this stage of development, and the whole program has to be viewed as a long-term objective. However, a good deal of work should start during the next five years. One of the most important tasks would be to lay down, at first, general principles for the designation of land for industrial and other economic purposes on one hand and residential purposes on the other.

15. It is the municipality which is primarily responsible for the planning, organization and financing of the work in this field. The principle of self-help should be advocated extensively in order to exploit fully all available local resources. The Government should encourage and support all the initiative of the municipalities in the field of town planning, and to this end, should see that all possible technical assistance and guidance is given to the municipalities in the matter of organization and working out of town planning projects.

## Other Social Welfare Programes.

16. There is considerable need for the organized social services to cater for the socially handicapped, rehabilitation of the beggars and disabled, jouvenile delinquents, youth, woman and child welfare, etc. With the economic advancement of the society, with the rise of real incomes and cultural standards of the population, many of these needs disappear but some of them remain, others change their social impact or some even increase. However great are the requirements for giving the highest priority to the expansion of directly productive economic activities, various welfare services cannot be neglected altogether. The organized and planned action undertaken by the Government through its respective agencies, not only aim at relieving human suffering, but also at showing the benefits of the Social Services that the rapidly growing economy will offer increasingly to society. This task has to be integrated into the development plans of Ethiopia.

17. The limitations of the available resources of Government and the large possibilities of drawing on the voluntary services rendered by various associations of citizens, requlates the organizational pattern that has to be applied in this area. It is the Government that has the responsibility for setting out the social work policy in the country. The voluntary agencies, helped, encouraged, and coordinated in their work by the Government, will have to be, however, the main channels through which the implementation of the national program of social welfare will be sought. This applies equally to the municipalities, whose position is similar to that of voluntary agencies, both in respect of financial means and the technical knowledge.

18. In addition to technical guidance and coordination, the Government will assist the various organizations by giving them finanical help in the form of grants-in-aid, which are considered necessary for initiating and encouraging the amount of social work needed in the next five years. For this purpose a provision of Eth.$ 400,000 per year, or a total of Eth.$ 2,000,000 for five years, is made. The principles underlying the policy of giving aid will be the following: (1) all social work institutions in the country must be registered with the Social Affairs Ministry; only organizations registered and approved will be given aid; (2) aid will be provided when the Ministry is satisfied that the proposed new program or new institution is required to meet specific needs; (3) the aid is aimed at further stimulating the activities of voluntary agencies to raise their own funds; thus the agencies must continue their previous efforts, particularly since the aid is generally meant for new programs on a corresponding basis; (4) as to the provision for various expenses, it is envisaged that the Government's financial help should cover up to 50 per cent of approved capital expenses, as well as up to 75 per cent in the first two years, and 50 per cent in the third to fifth years, of recurring expenses, while the rest should be covered by the voluntary agencies themselves.

19. Programs for socially handicapped children and the rehabilitation of physically disabled and beggars, are the types of social work for municipalities and voluntary organizations, which will enjoy priority in the Government's financial assistance during the next five years. In order to avoid duplication of work, the social welfare projects of the organizations such as Haile Selassie I Foundation, the Society for the Blind, and others, have to be undertaken in full consultation with the said Ministry,

20. In view of the extreme value of urban community centers in promoting the healthy and well-integrated development of the urban community on the basis of self help, five urban community centers will be established by the Government as pilot projects in different towns during the next five years. Each center should serve about 3,000 families or 15,000 people, and in the beginning its activity will be limited to youth, woman and child welfare as well as to adult education. In establishing these centers, every effort should be made to mobilize local voluntary cooperation and so avoid all unnecessary budgetary expenses.

21. The rehabilitation program of socially distressed persons should be also given its proper share in the Second Five Year Plan. The program should consist of:

(1) rehabilitation of those socially condemned and thrown into jail. The Prison Authorities should see that the various trades and handicraft training given to the prisoners at the moment is well organized and undertaken in all such institutions. A system should be worked out whereby each prisoner is permitted, and is able, to save a portion of his earnings while serving his term of imprisonment. Such a saving will enable the individual to start life after being discharged. This particular program should be coordinated with the program of settlement and economic development in general.

(2) the rehabilitation of youth so that delinquency and vagrancy among teen-agers is controlled and such youths are helped to become useful members of society. The achievement of this aim pre-supposes the proper reorganization of the working of the existing remand home, and it will also be necessary for the Government to establish one or two new homes for delinquent children at selected places.

(3) The program should give due attention to the correction and rehabilitation of socially disabled women. The energy and resources of philanthropic societies and welfare institutions should be combined to attack the problem by launching a rigorous campaign and working out programs so that this female population can be rehabilitated and reclaimed for the development activities of the country.

22. The major aim of the comprehensive planning is not only to raise the economic and social standard of the people, but also to bring about a cultural integration of the diverse population. Hence it is fitting to consider the assistance to be rendered to some of the backward areas inhabited by nomadic and semi-nomadic people to prepare them to participate in the development activities of the country. The assistance may vary according to local conditions and necessities. It is also important to have thorough research on such communities during the Second Five Year Plan period, to prepare the ground for specific assistance in the future national plans.

23. Reliable data are essential for the assessment of the magnitude of the existing social problems, and for the planning of the social activities for the country as whole. Social research and surveys are to be undertaken during the next five years with the aim of providing information and adequate assessment of the physically and socially handicapped, as well as on methods for their rehabilitation.

24. Changes and amendements in the existing social legislation, such as the provisions for adopting children, the Vagrancy Act, the Children's Act, the Associations Act etc., are needed. New legislation is also needed in order to implement the programs which will promote social health in general.

25. It is estimated that for the implementation of the objectives set forth in the field of various social welfare activities, a total of Eth.$ 3.6 million from Government funds will be spent during the Second Five Year Plan.

Out of this sum, Eth.$ 2 million will be extended to municipalities and voluntary organizations in the form of grants-in-aid. The remaining Eth.$ 1.6 million will be spent on capital and recurrent expenditure of the program to be undertaken directly by the Government i.e. for the establishment and operation of urban community centers, homes for delinquent children and physically handicapped persons, as well as for research.

# Chapter 21

## COMMUNITY DEVELOPMENT PROGRAM

1. The program of community development is assigned an important role in the socio-economic development of Ethiopia in general, and in rural development in particular. The main purpose of these programs is to unite the efforts of the people in the communities with those of the governmental authorities, to improve the economic, social and cultural condition of the communities, to integrate these communities into the life of the nation, and to enable them to contribute fully to the national progress.

### Recent Experience

2. The community development program was taken up as a result of the Order of His Imperial Majesty Haile Selassie I. No. 15 and 16 of 1957 (G.C.). Since its inception five years ago, the program has been tried in 15 areas. The program includes training of Village Level Workers, and so far 92 Village Level Workers have been trained. Some qualified young men were sent abroad for further studies in the field and 14 of them have come back and are actively participating in the program.

3. The First Five Year Plan allotted a sum of Eth.$25 million for the community development program; unfortunately, this sum was not appropriated due to financial difficulties and other factors. However, the Ministry of Community Development has managed to start the program with its small budget of Eth.$1.3 million a year. The contribution from the communities is estimated at Eth.$300,000.

4. The activities undertaken differ from area to area, depending on the needs and circumstances of the villages of the Community. Some of the activities include building of village roads, construction of school buildings, digging of wells, advice and technical aid on animal husbandry, improvement in house structure, advice on better farming, gardening, change in dietary habits, hygiene, etc. A few District and Village Development Committees have been set up in some of the areas. The role of these Committees differs from place to place but the common task they perform is to coordinate the work in the Districts.

5. The program of community development has not gone far beyond the blueprint stage, but in spite of all the difficulties it came up against, it has shown some hope of change in the outlook of the people in the rural areas. People have come to realise the principle of self-help and self-reliance. In all the localities where the program was taken up, the cooperation of the local people has been encouraging. This becomes clear from the fact that many members

of the community have come forward, for instance, with a building erected by their own resources and initiative as a center for community development activities. Some market places have been set up in a few centers, a number of community schools have been opened, and people have benefited from the experts' advice on animal husbandry, house maintenance, hygienic way of life, etc.

6. Though it is too early to assess the working of the projects, some useful experience has been gained and some difficulties have been encountered. One of the major difficulties in organizing community development has been a lack of co-operation and co-ordination of the various Government Departments in their specialized fields, the result of which was a duplication of work and waste of national resources.

## Basic Tasks and Principles

7. The basic tasks and principles of the community development program in Ethiopia are the following:

- to mobilize the local resources, both natural and human, with the least reliance on the Government for assistance, in order to accelerate the socio-economic development of the community concerned;

- to make the people of the community realize the benefits of substituting new methods of production for the traditional ones, and thus to pave the way for a gradual transformation of the purely subsistence rural economy into one more monetized, capable of contributing its potential share to the economic growth of the country;

- to provide basic education to the villagers in the fields of primary schooling, hygiene, nutrition, child care, housing, and organization to satisfy collective as well as individual needs;

- to encourage the people of the community to adopt the habit of self-help and self-reliance, and thereby change their psychological outlook of helplessness;

- to encourage the widening of the people's demand for higher standards of living in material as well as other spheres of social life;

- to make the rural community conscious of the importance of common aims and co-operative efforts;

- to increase the socio-economic development of the community so as to create favorable conditions for undertaking big projects and implementing them in these regions, and to ensure the most rational use of the resources supplied by the Government;

- to promote cultural integration of our diverse communities.

The achievement to be aimed at in the community development program must be supplementary to the development projects initiated by the Government in improving the living conditions of the people.

8. It has to be borne in mind that it is only through a rapid industrialization of the country that firm foundations can be laid for a lasting upward trend in social and economic development of the rural economy. In this process the community development program will have to play an important role by creating favorable conditions which will enable the rural economy and its population to contribute more efficiently to the country's socio-economic advancement.

9. Economic and social changes are interrelated, yet if the possibilities for achieving quick economic results exist, the emphasis on the services to the rural community that will directly contribute to the improvement of economic activities may be decisive in setting in motion an accelerated socio-economic development in all its important aspects. The fact that the agricultural sector represents a big potential source of raising the national income in the years to come, calls for special attention to be devoted to the community development programs in agriculture, with the aim of laying foundations for the speedy transformation of the traditional, subsistence agriculture into the more modern sector, without which the long-term sustained growth of the economy would not be possible.

This direction of the general policy is also suggested by the substantial rise in the quantity of agricultural output, with an accompanying increase of the real incomes of the rural people that can be expected through the introduction of comparatively simple new techniques and methods of farming.

10. While the meagre resources with which the Government can assist the community development projects will serve primarily for the advancement of agriculture and those activities which are more directly related to agricultural development, there will be plenty of room for local initiative in establishing the amenities that will lead to the improvement of general conditions of life in the rural areas. Those efforts will be encouraged and assisted by the Government within the limits of the financial means and trained staff available for these purposes, but above all through the provision of technical standards and designs for various work-projects that could easily be used in different localities.

11. The choice of a proper strategy concerning the scope of the programs in various stages appears to be an extremely significant factor for the success of the whole movement. It is important to realise

that it is much more desirable successfully to accomplish the targets of a moderate, even small-scale program, set for the next five-year period, than to embark upon a too ambitious campaign that may turn into many failures or at best bring about only very poor results. The soundness of this approach is strenghtened also by the need for proceeding carefully in the choice of the organizational forms and programs which will best suit the variety of conditions prevailing at local levels. Study, research and evaluation of the achievements and shortcomings, and the adjustments of the policies based on them, are indispensable if the community development scheme is to produce the most fruitful results.

## The Program in Various Fields

12. Agricultural Services. The basic objective, in common with other services of community development, is to educate and assist the rural people to use available resources more effectively. Owing to the extremely unproductive practices applied in farming, an important rise in agricultural production can be achieved if concerted efforts are made to teach the rural people (1) to use improved agricultural tools, (2) to use a new, more productive variety of seeds supplied to them, (3) to increase livestock production through the preservation of grass in various forms (hay, silage), (4) to supply simple crop-rotation patterns suitable to the local conditions of soil and climate and, (5) to start fruit and vegetable growing both for individual consumption and for marketing in the vicinity of towns. Planting trees and reafforestation, with its multiple benefits in terms of the protection of soil, provision of building material and fire-wood, moderation of the climatic conditions in the area concerned, should also be given full attention in the program.

13. Attendant on these programs will be the need for setting up small economic projects such as water mills, oil presses, nurseries for fruit trees and afforestation, which will make the community a more self-sufficient economic unit.

14. Marketing agricultural products, with the building of necessary storage facilities, should be promoted primarily through the village multi-purpose co-operatives, with the aim of speeding up the process of spreading exchange economy in the rural areas and increasing both the productive and purchasing capacity of the people.

15. It is most important to realize that success in getting the rural people to accept new and more productive practices in farming is conditioned by adequately resolving tenant relations. As long as the tenant's share in the produce of his work is very small, one cannot expect, in the areas where these relations prevail, that the tenants will be stimulated to put in extra effort to learn and apply any advanced techniques.

16. Health Services. In the field of health, teaching basic individual and household hygiene and the popularization of other sanitary practices are the most important objectives, which, if successfully achieved, will not only provide an indispensable basis for future action aimed at raising the health standards of the rural population, but will also undoubtedly contribute to the process of acquiring new and progressive mental out-looks by the people themselves.

17. While teaching the people hygiene, in addition to the practices of regular washing and cleaning, of having separate couches, cups, plates, etc. for each member of the household, of having properly arranged places for the disposal of waste, the villagers should in particular be told of the danger of cow dung and that of other animals. They have to be advised to abandon the prevailing practice of having animals living in places near or inside the houses where the people live. As to village hygiene, the people should be taught of the danger of stagnant water in the vicinity of their villages and how to overcome it. Simple laundry improvisations should be erected along the riverside in order to avoid washing in polluted water. An especially important task in this field will be to make the people aware of the danger of drinking polluted and dirty water, and it is imperative that the people in villages learn how to dig wells for drinking water wherever possible.

18. The advantage of a more balanced diet for the promotion of the people's health, and the health of children in particular, has to be brought home to the village families. They must be encouraged to produce and consume more vegetables, fruit, and milk, and thus gradually to improve their dietary habits.

19. In order to enable a continuous and well planned campaign for the dissemination of basic education in hygiene, nutrition, and sanitation, and to develop necessary health services, such as the protection of the health of mothers and children, the prevention and control of communicable diseases, the treatment of the sick and disabled, a network of health units has to be established. As this imposes high demands for doctors and other medical staff, medical supplies and equipment, the number of health centers that may be expected to be set up during the five-year period 1955 - 1959 will be on a very modest scale.

20. Housing and Handicrafts. The actual housing conditions of village families are so poor that any organized effort for their improvement not only brings about better standards of living in itself, but appears also to be an essential complement of the measures to be undertaken in raising the health levels of the rural population.

21. The process of changes in the construction of houses has to be started in the villages covered by the Community Development program. To this end the designs and instructions for building standardised types of houses that will meet the requirements of the environment and are based on the availability of local building materials, must be supplied by the technical staff. Experience may even promote housing projects on a cooperative basis and further lead the cooperatives to extend their activities to the manufacture of building equipment from materials locally available.

22. Furniture, such as tables, chairs and beds made by the villagers themselves should be popularized for use in every household. Clay work should be promoted wherever it is possible, and stoves made out of the locally available material should be encouraged, so as to introduce a substantial change in the ways of cooking and preparing meals in the village families.

23. Much of the success in changing the existing pattern of farming and house building will depend on the availability of skilled people in various crafts. There is such a lack of these people in the villages that thorough vocational training has to be organized on a regional level, so that a sufficient number of craftsmen will be supplied to the villages covered by the development program. Traditional home industries such as weaving, basket work, pottery, etc., have to be encouraged to provide employment and increase the purchasing power of the rural people, while artisan handicrafts should be commercially organized, particularly those serving the agricultural needs.

24. Education and vocational training. In addition to primary schooling which constitutes a part of the general educational program, out-of-school adult education and vocational training represent a field where most urgent needs are being felt. It is within the community development scheme that determined efforts are to be made to light the spark of knowledge and inculcate a sense of values and achievement into the minds of the rural people.

25. It is important to give the young people vocational training which will enable them to acquire elementary knowledge and know-how in the fields in which the community development program is launched (literacy, farming methods and techniques, hygiene, home economics and certain skills). Only then, when some people in the village have already become familiar with the benefits of the changes that will have to be introduced into their everyday life, more fruitful results can be expected from the village-worker's activities. The village worker would then be able to rely on the co-operation of trained young people, a whole team of enthusiasts, to spread the Community Development Program.

26. Villages where the program has been successfully implemented could serve as demonstration centers for training new groups of young people. In the fight against backward, deeply rooted traditional forms of life it seems essential that, at an early stage, those villagers who have already developed new attitudes and outlooks be used extensively as living mass media in spreading the concepts of advanced forms of productive activities and higher levels of living.

## Organization

27. An integrated approach to a given area by different Ministries acting as one unit for development has to be a basic principle underlying the organizational pattern of the national community development scheme. A team of technicians and a district development officer will be located at the Woreda headquarters. This team will be assisted by ten village-level workers. In the first instance therefore, the unit of operation of such a team of ten village-level workers should not be more than about 18,000 to 20,000 people. This proportion is adopted on the grounds that in most parts of the country communication is difficult, and that intensive work of a trained staff among villagers, a necessary condition for advancing successful results, will require frequent visits to the different villages. In each area of operation the Ministries of Public Health, Education & Fine Arts, Agriculture, Public Works, Ministry of National Community Development, supported by the Ministry of Interior, will work together, co-ordinated by the Ministry of National Community Development. This will ensure an integrated approach on the part of Government in dealing with the community as an indivisible entity.

28. The operational technical staff charged with the direct execution of the programs in the selected areas is made up of a technical team at the area headquarters and of village-level workers. The technical team consists of the district development officer as the captain of the team, and of the district officers, technicians and specialists in agriculture, health, education, social work and public work, as its members. The village-level worker is a multipurpose worker duly trained in the techniques of community development and organization, who is to be the forerunner of the district technicians, inducing and organizing the Community to co-operate in carrying out special programs which the district technicians will have to initiate and explain. The district development officer, being administratively responsible for the execution of the approved program for the district, is authorised to supervise and guide the work of the village-level worker, and to co-ordinate the work of the district technicians, who, in technical matters, are supervised by their respective Ministries.

29. The program for the period 1955 - 1959 envisages that a total of 40 - 50 Woredas, with some 800,000 - 1,000,000 people, will be covered by the community development projects. The coverage could gradually extend in accordance with the planned increase of trained staff, so that the planned number of areas under the program should be reached by the end of the planned period.

30. Great care has to be taken that the selected areas are normal communities with reasonable chances of success of the program. This is an important principle for the start, when one has to learn about the most adequate techniques to be applied in this country, and when quick results should enable these first districts to be used as demonstration centers.

31. The process of co-operation in planning and administration between different Ministries has to operate from the Central Government through a provincial and Woreda administration, right down to the unit level. The Ministry of National Community Development is only the administrative and organizational channel through which the technical Ministries implement their programs. Thus the agricultural, educational, and health programs undertaken at the unit level are not the programs of the Ministry of National Community Development, but are the programs of the National Government and particularly of those technical Ministries concerned with the programs.

32. It is proposed that a National Board of Community Development be appointed to lay down general national policies pertaining to community development, to initiate all the activities needed, and for the proper execution of the programs.

33. For co-ordination at all levels, central, district, and village co-ordination committees will be set up, these latter having officials, as well as 5 to 7 selected nonofficials as their members to present the views and opinions of the people of the area concerned.

34. To spread the ideas of the community development program among the rural people and to facilitate their co-operation in programing and building the projects, village associations such as Kub, Eder, Mahber, as well as youth and womans organizations will have to be called upon to give their full support.

## Government Assistance and Financing

35. In the program of community development the fullest mobilization of available local resources such as labor, material and cash must be the underlying principle, and Government assistance is to be looked for only when and where it is indispensable and essential. However, at this initial stage, Government assistance,

organizational, material and financial, will have to play an important role in setting in motion the dormant potentialities of the communities.

36. Government financing of the national program implies that each of the selected districts will be allotted a certain sum yearly for working funds and a lump sum for the whole five-year period, to provide for nonrecurring expenditure. Thus, the use of these funds is not earmarked for particular projects in advance at national level. It has to be originally specified in the district programs according to the needs felt by the people in the respective areas.

37. The total sum of the financial resources to be employed for the program of the Ministry of Community Development during the next five years would amount to Eth.$25.5 million, out of which about Eth.$14.7 million will be recurrent expenditure, while Eth.$10.8 million will be used for investment purposes. The above sum is apportioned as follows:

| | Recurrent | Eth.$ Investments |
|---|---|---|
| Community Development | 10,020,000 | 9,866,000 |
| Training of Community Development Program | 1,504,000 | 153,498 |
| Social Welfare | 2,625,000 | 675,000 |
| Training for Social Welfare Program | 282,000 | 10,502 |
| Labor Exchange | 344,000 | 68,000 |

38. One of the most desirable aids that the Government can give at the initial stages of the community development program is by establishing a network of model farms, already taken up by a Government Agency at Awassa and Gibbe.

These projects form a part of the program of agriculture but wherever possible they should also serve to demonstrate advanced forms of farming techniques to the villagers, and as a place for training development workers and young agriculturists.

39. It must be kept in mind that a national program of this nature will remain only a blueprint if an adequate number of professionally trained people in all the fields over which the program extends is not provided for. Due regard to this aspect is paid in this Plan by making necessary provisions to train some 900 agricultural technicians, and 175 agricultural experts who should be college graduates, in order to meet the demands of the program for the next five-year period.

40. Finally, if Community Development Program is to succeed, and if the maximum use of the limited resources of men, money and materials is to be made, planning must be undertaken at the village level by the people, assisted by the District Team. The Plan must spell out clearly the community contribution and state the nature of Government aid required. These village plans must then be co-ordinated at the District level and later at the National level. The final Plan must reflect realistically the best use of Government resources in different Community Development Districts and the program must be executed according to a time schedule worked out in the final Plan.

## REGIONAL DEVELOPMENT

1. Regional Development constitutes an integral part of the overall planning of a national socio-economic development. Even if this aspect is not explicit, it is still present in the chosen pattern of a country's development.

The absence from the plan of a regional approach leads to territorial distributions of production, social services, and the population, which as a whole, cannot be considered rational or desirable either economicaly or politically.

Thus, in order to make planning contribute more efficiently to the national socio-economic advancement, the regional aspect must be clearly stated and it must become one of the basic criteria in fixing the development targets.

2. The choice of an optimum pattern of regional development is a complex task in itself, yet it assumes necessarily new and specific features when the peculiarities of Ethiopian conditions are to be fully reflected. By its nature regional development belongs to the sphere of long-term economic development. It is only in this setting that one can get a full picture of the benefits of Regional Planning. However we must begin by assessing, as precisly as possible, the actual potentialities of each region, to be able to determine what can be the contribution and role of each region in the long term economic development of the country.

3. The assessment of the potentialities of various regions in Ethiopia for the country's economic growth are still in a rather initial stage. Prospecting for mineral and other underground wealth has covered so far only a small part of the vast Ethiopian territory. Though research and study has progressed more satisfactorily in the field of agricultural development in general, especially in production, forestry, and hydro-electric potentialities of rivers, the area covered has remained limited and much more research has to be done in order to complete the picture. It would therefore, be premature to work out a complete pattern of regional development unless more information and knowledge on the country's actual potentialities are gathered. This has to be an important field of research, and in the Second Plan more extensive work in that direction has to be continued.

4. The incompleteness of the available statistics, however, does not preclude the possibility of making a beginning in regional planning in the Second Five Year Plan. The existing knowledge of the factors such as the size of the national territory and its basic geographic features, climatic conditons, the land, the communication pattern, the distribution of the population and the existing urban settlements, forms a framework within which an approach to regional development planning may be made.

In this stage only some basic principles, which appear economically justified in the light of the facts knownand which, in themselves appear as a logical and rational step in the elaboration and implementation of a consistent long-term regional development scheme, may be laid down.

5. Ethiopia is a vast, relatively underpopulated country with an uneven distribution of favorable natural conditions for economic development. In such conditions transport assumes an important role and ranks among the most significant criteria when deciding on a regional pattern of economic development. Due to the long distances over which the goods have to be conveyed, transport in Ethiopia has to be considered as a factor which tends to retard the economic growth. Today the length of the route which one ton of goods has to travel between the producing or importing point and the consuming point amounts on an average to approximately 700 - 800 km. In many cases the transportation costs exceed production costs. Thus the economy, and the achievement of optimum economic results on a nation-wide scale depends to the greatest extent on the minimization of the transport cost. This can be achieved if, to the greatest possible extent, the principle of concentrating modern economic development in the economically most promising regions is adhered to.

6. The main features of Ethiopian geography and the land, point to that regional pattern of economic development which, among other things, also provides for an optimum shortening of transport routes and consequently for the minimization of the transport costs. Due to the significance of the production of raw materials in agriculture and their industrial manufacturing at the speed at which the Ethiopian economic growth would require, it appears that the river valleys stand out as regions whose development offers the most promising effects on the national economy.

7. The research which preceded the elaboration of the Second Five Year Plan shows that the abundance of favourable factors makes the belt Shashamane- Nazareth-Awash-Tendaho-Assab one of the regions, it having already some initial scattered development activities and communication facilities started - which deserves full attention in the Second Plan. There are ample possibilities for increasing the effectiveness of investments by bringing closer together the agricultural and the relevant industrial production, as well as by developing a network of complementary industrial undertakings. The development of agricultural production in the region will have to play one of the decisive roles in the fulfillment of the Second Plan's targets envisaged for the production of cotton, sugar, wheat, and livestock (in the areas bordering the belt). Accordingly, new industrial projects for processing the agricultural products will have to be established in the same region. The concentration of production activities will also bring about a concentration of the consumers, so that not only the shortening of the routes for goods in process but also for the finished goods from the producers to the consumers will be effected, and thus a substantial part of the national income will be saved. By the same token the need for expanding the communication network will be reduce

and it will then be possible to so develop the communications as to cater for a large traffic and thus achieve better economic results with smaller investments.

8. Besides the Awash Valley, research has to be started in the Wabi-Shebelli and Blue Nile Valleys in order to assess the potentialities of other major river valleys. This research together with those which will cover the other river valleys, should provide a basis for the full elaboration of a scheme for the development of those economic regions which are builtup around and along the main river valleys. It seems most probable that due to the accumulation of a number of favorable factors, these regions will constitute a coherent whole within which the largest part of the process of integration in Ethiopian economy will take place.

9. Geography has made the vast area known as the High Plateau quite homogenous with regard to its natural and economic characteristics. It is a region that extends at a fairly uniform altitude, between two or three thousands meters above sea level. The fact that the plateau is bordered by many steep slopes has made this vast area virtually an isolated territory, particularly as there have been no roads to give easy access to it. Yet this is the part of Ethiopia which is most densely populated, with very favorable conditions for the production of wheat and for raising livestock, sheep in particular. Afforestation can greatly protect this area from wind erosion and improve the water supply, which depends mainly on rainfall. The potentialities of this region for increasing agricultural production and building adjacent smal scale and other industries for the conversion of agricultural produce into processed food should not be neglected, and will have to become the subject of a special development schems. The construction of roads will have to constitute the first phase in activating the economic potentialities of this region.

10. There are other regions - such as the forest-coffee production area - whose position is determined by the peculiarities and significance of their output to the national economy. Similarlyby future intensive prospecting for mineral wealth may open new most promising industrial development areas outside the river-valley pattern. This will make it possible that in the future development plans the decisions concerning the allocation and timing of the investments may be based on a more elaborate scheme that points out the priorities and will thus contribute to the optimum growth of the national economy.

# Chapter 21

## POLICY AND MEASURES

1. The general economic and social policy adopted for the Second Five Year Plan, as well as the policy concerning the main sectors, has been discussed in the preceding chapters in terms of development targets, resources and measures. In addition to the setting of the development programs, it is necessary to adjust the economic and financial system, as well as the socio-economic institutions, to the national objectives, so as to establish an adequate frame-work in which the economic and social development can take place. As a matter of fact, the development plan and the institutional framework are an integrated unity, for the plan has to be implemented in an appropriate environment, whereas the environment has to be adjusted to the development targets. Moreover, many national objectives can be achieved only as an indirect effect of various development schemes. All this calls for a clearly declared general policy to be followed during the next five years and to be known to everyone concerned.

### Co-operation of the Public

2. A national development program viewed by economic and social circumstances can be implemented only if supported by the whole Nation. Neither the Government's efforts alone, nor the support of some sections of the population only, can lead to the fulfilment of the Plan. The Second Five Year Plan, which envisages important progress, calls for hard work and sacrifices. Its intention is to distribute equally both the benefits and burdens among various sections of the population. In a democratic society of the Ethiopian type, the burden and sacrifices should not be imposed by the Government, nor should the fruits of the progress be limited to a small segment of the population. This is why the co-operation of the public is most necessary, and why it is one of the most important factors for a successful implementation of the Plan.

3. The idea to progress implies a conscious contribution of all citizens to various development programs, according to their physical, intellectual and economic capacity. In fact the fulfilment of the Second Five Year Plan requires a national awareness of the tasks and obligations and a planning-mindedness. It should also encourage the Nation's attitude in respect to progress and motivations concerning private and public affairs. Having great responsibility for the implementation of the Plan, the Government will have to share it with other agencies concerned by distributing the tasks and responsibilities, through adequate information of the general public with regards to the objectives, achievement and failures, and by explaining how better to achieve the objectives set forth. Ethiopians are being faced with a great economic and social undertaking, therefore the information and educational functions of the Government will have to play an important

role in mobilizing the Nation for the implementation of the Plan.

4. Ethiopization of the Economy- Today, all over the World, the principle that national economy has to be owned and managed by the nationals has been accepted. Due to historical reasons a large part of the Ethiopian business is owned or managed nowadays by foreigners. These must be Ethiopianized. Ethiopianization of the economy as conceived by the Second Five Year Plan by no means restricts or limits the rights of foreign subjects. It is an attempt to extend Ethiopia's wealth and income, to train Ethiopian technical and managerial staff, to establish new Ethiopian enterprises and to promote economic and social activity in all directions. Together with the Ethiopianization of the economy, the economic, social, and cultural relations with other countries and foreign citizens should be extended and strengthened, for the future development of this country provides sufficient room for both national and foreign undertakings.

Land Reform and Settlement

5. The advancement of agriculture and the possibility of having this largest sector of the national economy contribute its fullest share to the country's faster socio-economic development in the future is conditioned by the magnitude of certain outdated relations in the agricultural sector. The peculiarities of a historical process of settlement and occupation of land in Ethiopia, have been brought about and preserved until the present. Among them the most important are (i) the multiplicity of ownership systems which are neither legalized nor clearly defined, (ii) the legally undefined and varied ladlord-tenant relationships which, in terms of both the size of population and the land affected, present a problem of the greatest importance. This situation is basically due to lack of legislation dealing with the landownership matters, as well as to a complete lack of cadastral surveys and registration of land.

6. It has to be pointed out that an important part of any increase of the agricultural output has to be realized by improving farming methods in the peasant sector of agriculture. As tenancy is the prevailing pattern of land utilization in many parts of Ethiopia, it stands to reason that no measures and policies aimed at the stimulation of peasants to improve their methods of farming and increase productivity could lead to the desired results unless the landlord-tenant relations are regulated in such a mannter as to enable a tenant to share substantially in the increase of the product of his own efforts.

7. The lack of clearly defined ownership rights and land registration makes it impossible to use tax policies and other fiscal measures efficiently both to increase the saving capacity of the economy and to encourage and force the rational utilization of agricultural land. They could also contribute significantly to the solving of settlement problems in Ethiopia.

8. The studies that have been carried out so far indicate that the nature and the magnitude of all major land reform problems involved are such that they cannot be solved in a short period of time. Their solution is, however, a prerequisite for starting the process of modernization of agriculture, without which no steady growth of agricultural output can be hoped for. The fact that an accelerated overall economic development is already under way does not mean that the problems of land reform can be left unapproached any longer. On the contrary it implies that important steps towards their solution must be undertaken during the Second Five Year Plan. In the course of the next five years we must concentrate on the following aspects of land reform: (i) improvement of landlord-tenant relations, (ii) progressive taxation, (iii) abolition of out-of-date holdings, and (iv) cadastral surveys and land registration.

9. Improvement of landlord-tenant relations - Improvement and legal enforcement in this respect should include rent control, security of tenancy and legalizing leasing arrangements. Security of tenancy however, is not as acute a problem as the rent control and leasing arrangements. But, to have clearly defined status of the tenancy, security with regard to minimum period and conditions of eviction should be legalized.

10. Existing trends indicate that the rent and sharing arrangements do not encourage improvements of farming methods, nor investments, and this has resulted in the preservation of a very low productivity of those farms. It is necessary, therefore, to undertake pilot studies and careful analyses in different regions, on the basis of which rent should be determined and made legally binding on both landlords and tenants.

11. Progressive Taxation - The limitations of infrastructure, physical and biological environmental difficulties, and political incidences have been causes for disproportionate distribution of population at the initial stage of the country's development. In areas (high altitudes) where the population pressure is rather high, the land has been subdivided into small and uneconomic units. On the contrary, where the population pressure is low (low lands and forests), huge and uneconomic units of lands are owned by smaller groups of owners. Failure to check and decrease the continuation of both trends would hamper development, by giving way to maldistribution and misallocation of capital and labor, and under-utilization of potentially productive areas. With this in view, it will be absolutely necessary to impose a policy of progressive taxation of holdings. This is intended to persuade owners of lands to be confined only to areas they are economically able to utilize. In such a manner it would be possible to make potentially accessible areas settled and utilized by farmers who will move from densely populated areas, or to have them used by big commercial farms, either public or private. The analysis and setting up of the progressing model of the new tax has to be based upon careful studies of the existing taxes and their implication.

12. Abolition of Out-of-date Holdings - Systems of holdings

which are incompatible with economic and social development should be eliminated. Owing to the large variety of existing out-of date-ownership systems, the methods and procedures for abolishing them should be adjusted to the local circumstances. In establishing new relations, economic considerations, social justice and uniformity should be the main criteria. It is believed that the consequence of such action will be to increase Government revenue through introducing lands which were disguised in the taxation circle, and to give an impetus to economic and social development of these areas.

13. Cadastral Survey and Land Registration - Cadastral survey is a basic condition of carrying out the overall policy of land reform. The taxable capacity of land even under the present system of land taxation could be tripled or quadrupled if uniform cadastral survey is carried out. The survey is planned as a long-term undertaking and it is intended that complete information about any piece of land should be clearly known and officially registered. This survey will also increase the availability of potential and accessible lands.

14. The above mentioned tasks, which constitute a part of a longer term program of land reform in Ethiopia, would have to be reconsidered in accordance with a detailed study undertaken by experts on the basis of an agreement between the Government of Ethiopia and United Nation Food and Agriculture Organization.

15. An autonomous Government Agency will be set up to deal with all the responsibilities in respect of land reform, i.e., to carry out all the tasks which are set forth in this Plan. The agency should work out the most appropriate methods and procedures and establish a long-term working program. For the next five years priorities should be given to the most promising agricultural regions.

## Financial Policy and Measures

16. With the aim of providing sufficient financial funds for the implementation of the Second Five Year Plan, the national and State financial system has to be expanded and strengthened. With this in view Government policy and measures will endeavor to increase the saving capacity of the country, to secure necessary financial means for State expenditures, to acquire the foreign resources needed to implement the Plan, to encourage and to promote investment in kind and to establish financial and other reserves to maintain a sound economic situation.

17. National Savings - A Government's permanent policy is to increase the national savings in order to secure adequate financial resources to be used for investment. The increase in national saving demands a redistribution and restriction of the current consumption, both individual, general, and Governmental. In fact, if used for development

purposes, saving is nothing more than postponed consumption which is being invested for further growth of production and consumption. This is actually the philosophy of economic growth, that the present restraint in consumption will in the future result in larger consumption and better living.

18. The business community is recommended to save more by increasing production and turnover, and various Government measures will be introduced to reduce the operational costs and avoid all kinds of unnecessary expenditure. To make the best use of saving, the community should either reinvest it or invest it in new undertakings. In addition to the saving, a large part of depreciation should be used for additions and improvement in existing business. The Government will encourage all investment in productive sectors above a stipulated amount by appropriate progressive tax exemption according to the size of the investment. The Government will also start new profitable semi-public undertakings to encourage private savers to invest and to promote the upgrading of entrepreneurship. It will sell the shares of existing public companies to private concerns with the view of mobilizing private savings for productive purposes. The State Bank will extend its services, particularly the Current Accounts, to businessmen, in order to avoid the immobilization of the national saving.

19. A large-scale Small Saving Scheme should be launched by the Government through various financial organizations. Savings accounts with the Bank should be extended as a fair method of saving for old age and other needs. As soon as the post office services can be improved, post office saving will be introduced to serve, in particular, those areas where there are no banks. Insurance companies should expand the life insurance business, as well as other kinds of insurance. The Government will issue Government bonds and encourage the traditional methods of saving, which should be incorporated into the Small Saving Scheme. Small saving should get publicity, both in urban and rural areas, it should be advertised as a means which will assist the national development and provide the people with security. Special attention should be given to the mobilization of small savings to extend the financial basis for additional credit facilities.

20. Both forms of Government saving, increasing revenue over expenditure, and acquiring profits from the public enterprises, will be extended during the Second Plan Period. All the Government Agencies must use in the most efficient way the resources which are made available for personal emoluments and other expenditures, and public enterprises have to be managed along the most profitable lines. The surplus of Government revenue over expenditure will be primarily invested in new public enterprises, and kept as a reserve for further Government action, as well as to maintain the stability of the national economy.

21. Tax Policy and Measures - Conceived as a part of the

Government's economic policy, the tax policy should aim (i) at encouraging economic development in conformity with the objectives of the Second Five Year Plan and the long-term development program, (ii) at collecting sufficient financial means, needed to carry out the Government's functions in the field of public administration, social services, economic services, and for economic development, (iii) at distributing the tax burden among the taxpayers in proportion to their economic capability. The Government's taxation policy should contribute to maintaining the stability of the purchasing power of the national currency, by adequate allocation of direct and indirect taxes. The tax system should be properly co-ordinated with the growth of economic activity and with other financial measures to be undertaken by the Government and its financial agencies.

22. With this in view the Government will steadily improve the tax system in order to meet the growing needs of State revenue. Of course, additional income will be provided from the rising economic activity and by a better system of tax collection. However, the improvement in the tax system will also have favourable effects, both in their economic and social aspects. The deficiencies in the present tax system broadly suggest the following corrections. In order to achieve a more equal distribution of taxes, the rent tax and business tax should be combined, while progression in taxation should be sharper, as it is in other countries. This will also be necessary since the income which is being invested will be tax exempt for several years. The land tax and tithe on land should also be improved, both in respect of determining the basis for levying and of introducing progressive rates. The education and health taxes should be imposed not only on the rural incomes but also the urban, especially since the urban population gets more benefits from the social services than the rural population. The introduction of the death tax should also be considered with the view to integrating all taxes into a consistent and modern system.

23. It should be pointed out that no direct and fast changes may be expected as far as relations between direct and indirect taxes are concerned. However, the indirect taxes will have to be readjusted in the light of growing economic activity especially in industry and foreign trade. First of all, the indirect tax system has to be simplified in order to facilitate collecting and control of tax payments. Excise duty as the main internal indirect tax has to be adjusted to the present level of the customs duty, in order to transfer the unearned incomes of the domestic industries to the State Treasury. On the other hand, customs duty tariffs must perform a double task, to protect the domestic industry and to facilitate the foreign trade policy in respect of imports of capital and consumers' goods. With the view of creating a sound economic climate and of promoting the exchange of goods and services, indirect taxes should be properly co-ordinated and should form a unified system.

24. Various tariffs and other charges which are being paid to the Government for services which it renders through its agencies and institutions for individuals and corporations, should also be reformed.

The charges should, in fact, cover a larger part of the cost of services concerned, and should be a regulator of the extent to which the services are to be developed. They should correspond to the actual benefits which individuals and corporations derive from the functions of the Government Agencies and social service institutions. Although it will not be possible to transfer many institutions which are subsidized by the Government to a new self-supporting basis, the principle of compensation of the costs should gradually be introduced even during the Second Five Year Plan period.

25. The Government financial agencies, both central and local will have to perform great and responsible tasks. Their organization should therefore be gradually improved, while efficiency will have to increase in all respects. The Government will provide the executive personnel with additional training and will undertake all appropriate measures to ensure the implementation of the legal procedures in public financial matters. Tax control will steadily have a greater importance in protecting both the Government and the taxpayers' rights and interests. With all these improvements in view, both in respect of the tax system and of the financial organization, it is to be expected that everyone concerned will carry out his duties and obligations, so as to facilitate the implementation of the Second Five Year Plan.

26. Banking and Credit Policy - Banking and credit policy should be one of the most important instruments for the implementation of the development programs. To meet the growing demand of the national economy the Government will promote all kinds of banking operations, with the aim of supplying the economy with sufficient money, mobilizing the savings and extending credits. The public banks will follow an active saving and credit policy, properly co-ordinated with the Second Five Year Plan targets and financial scheme. The Government will endeavour to maintain internal and external stability of the national currency with a view to creating sound economic conditions and to stimulating investment and production.

27. Credit facilities should be extended both for investment and current transaction. Credit should be granted to private concerns and to public undertakings according to the priorities established for implementation of the Plan. Because of their importance, the directly productive industries should get priority as far as investment credits are concerned. As to the short-term credits, they will have primarily to be extended to undertakings which promote exports and contribute to production. If necessary, a differential rate of interest will be introduced to stimulate the kind of business which is in conformity with the Second Five Year Plan. With a view to completely integrate the banking activity in the framework of the Plan an annual credit program should be worked out, to be integrated with the annual plan and State Budget.

28. To produce sufficient money to provide credit to the economy, the banks have to extend their operations according to the distribution of tasks and responsibilities to be established by the Government. The

activity and operations of the banks will have to be co-ordinated by the Government, particularly through annual credit programs. In principle, deposits, savings, and current accounts, public funds with the bank and others, have to back the credits to be issued. Therefore, these kinds of operations should be given full attention, because they expand the credit capacity of the banking system. Insurance companies' activities and the Public Servant Pension Fund will also support the expansion of credits. However, due to the bigger demand for credits, they also have to be extended on account of hoarded money as well as on account of a surplus of currency-backing over current foreign trade requirements. In fact, a more flexible credit policy has to be applied during the next five years in all respects. It should in particular aim at avoiding inflationary pressure which accompanies a fast growth of economy and investment activity.

29. With the aim of promoting banking and facilitating the implementation of the credit program for the Second Five Year Plan the Government should reconsider the present bank organization. Besides the State Bank, which should be the central bank and issuing organization, a public commercial bank should be established with a network throughout the country. Local banking and promotion of the current economic activity, as well the mobilization of savings should be the main task of the Commercial Bank. In addition to the Development Bank, which should expand its long-term credit business, a new investment bank should be established to issue medium-term and long-term credits for small and medium-scale undertakings. The Government will also encourage all kinds of insurance business through the insurance companies, and with a view to stabilizing insurance activity it will consider the feasibility of reinsurance in Ethiopia by one of the existing companies.

30. Foreign Exchange - The importance of foreign resources needed for the Second Five Year Plan is emphasized by the nature of the uses for which they are intended. The development of economic sectors as well as of education and public health largely depends on the inflow of foreign exchange, particularly with regard to import of machinery and equipment. Efforts should therefore be made to cover the foreign exchange requirements, since they are an important factor for the fulfilment of the Second Plan. It is well known that Ethiopia is a promising country with rich natural wealth and wide economic possibilities, and her internal and international position is such as to allow for a much more complete economic co-operation with other countries. All this is a realistic foundation for an optimistic outlook in respect to the foreign exchange problem in the frame of the Second Plan.

31. The Government's policy in the next five years will be primarily to rely on the country's economic possibilities exports will be promoted to earn more foreign currency, which will be used to import capital goods and goods in process. However, due to the need for foreign exchange being in excess of the regular balance of trade, which will be caused by increasing imports of equipment, additional foreign resources

will have to be provided. The Government will, therefore, undertake appropriate measures to extend the inflow of foreign resources, both through economic and technical assitance and by attracting foreign investors.

32. With respect to foreign public loans, the Government will endeavour to contract agreements with more foreign countries to provide sufficient foreign funds for the implementation of the program in general, and especially for the key projects. It is highly desirable to obtain long-term general credits to be allocated according to the priorities of the Second Five Year Plan. In principle, foreign credits will be used for productive projects which will be able to repay the credits out of the returns. Complete financing of development projects, both the external and domestic costs, and full economic and technical assistance, to cover all preparatory and construction works, including the training of the Ethiopian personnel, is highly desirable.

33. As regards foreign direct investment, the Government will provide all facilities to encourage prospective foreign investors. Foreign investors will be particularly encouraged to establish new factories, to study and prospect for mineral resources, to open mines, extend large-scale farming etc. Foreign private capital is needed and welcome to Ethiopia, so that the Government will endeavour to make appropriate arrangements to establish mixed companies, Ethiopian and foreign. Existing foreign firms will be encouraged to continue and the Ethiopian firms to reinvest and expand business.

34. Technical Assitance from the United Nations and friendly countries and Grant-in-Aid schemes are expected to play an important role, particularly in the field of social and scientific development. Appreciating the efforts made by other Governments, Ethiopia will contribute to the mutual assitance of nations. The Government will continue to offer educational facilities to African students, to support various international schemes related to the economic and social progress of the developing countries, and to contribute in various ways to the economic and social co-operation of Nations.

35. Private and Public Sectors - Aiming at improving general economic and social conditions the Government will promote both private and public sector undertakings. In a mixed economy of Ethiopian type, private and public sectors have to co-operate closely for the progress of the Nation as a whole. Neither the private nor the public sector will have priority, both of them should have equal rights, obligations, and facilities. There will be no limitation to the private sector either in the kind of business or in the size of enterprise. However, the Government will assume the responsibility for the development programs which are of vital national importance and cannot be accomplished by private concerns.

36. Owing to the lack of entrepreneurship and managerial and technical personnel, the Government will establish public or semi-public economic enterprises. Undertakings of the Public sector will have to be

accessible to private concerns also. With this in view the Government will, i.e. through its agency concerned distribute shares and bonds so as to attract private savers to the economic activity. It is hoped that Ethiopian savers will be sufficiently business and planning-minded to support such Government actions financially and in other respects.

37. Economic and Social Legislation - There is a large field for improvement in the national economy and social life to be achieved through a more adequate and up-to-date legislation. Traditional common law cannot satisfy the new requirements and relationships which are being spread by economic and social progress. So far the legal background of the national life had been established through basic laws and regulations concerning the functions of the Government, and the socio-political relations in the country. Neither complete economic nor social legislation has been established, due to well-known reasons. However, the diversification of the economic and social relations suggest additional legislation, to lay down the rules of economic and social behaviour and promote the national progress.

38. During the Second Five Year Plan period the legislative bodies will have to pass a series of new laws concerning the status, function, and the rights and obligations of economic units. A planned economy such as the Ethiopian requires a properly defined economic policy and action in economic affairs in general, and particularly in planning. New rules have to be adopted concerning the distribution of economic functions, the facilities to be given to new undertakings, the promotion of trade, industry, agriculture, building and other activities, and agrarian relations, as well as the regulations which have to assist the implementation of the financial scheme for the Second Plan. Owing to the growing importance of the public and semi-public economy, regulations should be issued to define the place and role of public enterprises in the national economy and to ensure their extension for the benefit of the Nation. Legal provisions, together with the economic and financial measures to be undertaken by the Government, should improve the present institutions and establish such an economic system which will encourage and promote the growth of the national economy.

39. Social legislation which will have to be introduced during the Second Plan period is also important. Labor legislation is perhaps the most urgent, due to increasing employment and to the need for creating favourable conditions for upgrading skill and efficiency. The protection of handicapped groups of population also calls for the organized action of society, to be properly defined by law. In addition to the social legislation, regulations concerning public administration, distribution of responsibility, public servants' rights and duties, etc. would have to be passed.

40. Development Agencies - The implementation of the Second Five Year Plan will of necessity call for the establishing of new

development agencies, which will have to assist the development of the propulsive sectors. Owing to the lack of advisory services concerning economic, technical, and managerial problems, the implementation of various programs might be hampered. With a view to facilitating the fulfilment of the Plan, both in its techno-economic and financial components, the Government will set up new development agencies to act on behalf of the Government in various fields of economic development.

41. Besides the Development Bank and the new Investment Bank, which will have to deal with long-term credits, the Government will establish a Development Fund as an instrument for financing new public undertakings, both in economic sectors and in social services. The income of the Fund at the beginning will be supplied by the State Budget out of the provisions made for investment purposes. Gradually and along with the budgetary reform, the income of the Fund will be provided by the earnings as well as the capital repayments of the public enterprises. The utilization of financial means of the Development Fund will be decided upon by the annual plans in conformity with the investment targets set out for the current year.

42. Technical Agency will be set up by the Government to deal with the technical and economic problems of the new projects. The Agency will extend all kinds of services needed for the construction of new projects, such as feasibility studies, techno-economic analyses, designing, execution of works, supervision, etc. primarily to the public sector but also to the private sector. As an autonomous public self-supporting body the Agency should contribute to stability on the investment services market, and thereby assist the economic expansion. In addition, an Industrial Promotion Service will be initiated within the Ministry of Commerce and Industry to help domestic and potential foreign investors as regards information, economic conditions, and other relevant matters.

43. The Government will also establish an Agricultural Development Agency to carry out the tasks related to the development of large-scale public and co-operative agricultural undertakings. This Agency should be responsible for all aspects of the extension of modern farming and animal husbandry, such as designing, agricultural research, organization, job training, marketing etc. It will be an autonomous public body to be financed out of Government investment funds and credits, and should gradually become self-supporting. The Agency will co-operate very closely with the Community Development programs in various fields of activity.

44. During the Second Five Year Plan period the responsibility for feeder road construction, public health, local programs, primary education, etc. will be transferred from the Government to the provincial authorities. In addition the Government agencies at provincial level will be strengthened to better administrate the various economic and social programs. With a view to co-ordinating the programs within the regions and to stimulating local initiative for progress, it is recommended that

Regional Economic Councils be established as advisory bodies for regional development. The councils should work out regional programs which should be co-ordinated with the community development schemes and assist the Central Government in establishing priorities for the development of the regions concerned. They should also speed up the progress of the regions by local contribution of finance, material, and labour. After due consideration the regional development programs should be incorporated into annual plans provided additional resources can be ensured.

45. Addis Ababa Five Year Development Program- With a view to assisting the development of the capital city, the Second Five Year Plan has provided financial resources to solve the major problems which arise from the fast growth of population consistent with Addis Ababa's role both in national and international life. Provision has been made to improve the city transport and communications system, to continue town planning, extend the water supply, and to improve the town sewage system. All of this is capital consuming investment which cannot be secured by local resources only, so that it had to be anticipated in the National Plan.

46. Additional projects are foreseen for Addis Ababa as a part of the economic and social development of the whole country. In the extended Addis Ababa regions new industries are to be constructed, especially the ones intended to supply the growing population with consumer goods. Due to its central position, Addis Ababa is expected to attract a great part of commerce and trade and other economic services. Education, particularly the University, and the various social and cultural activities will expand in Addis Ababa during the Second Plan period. All this points to the need for a planned and co-ordinated development of Addis Ababa as the capital city and in respect of regional development.

47. In order to co-ordinate all the programs anticipated by the Second Five Year Plan with the local programs, it is recommended that a Five Year Development Program for Addis Ababa be worked out. The program should partioulary:

(i) summarize all the programs and projects foreseen by the Second Five Year Plan in terms of additional economic and social activity, income, employment and population,

(ii) estimate the part of the program that local resources can carry;

(iii) assess the possibilities of improving housing conditions through low-cost housing schemes and self-help, and consider what public utilities are needed,

(iv) continue the town planning with the view to facilitating immediate and future construction;

(v) co-ordinate the various development programs of local authorities into a consistent whole and work out the priorities, bearing in mind the need to improve the living conditions of the local population.

It is to be expected that the Addis Ababa program will be properly co-ordinated within the framework of the Second Five Year Plan. Additional resources will be made available for its implementation.

48. Municipalites - The Municipalities should so plan their programs that it will effect the local economic and social life. It is very important to get the attitude of the local population adjusted to the progress anticipated so as to achieve full effects of the progress, both direct and indirect. In addition, local initiative, both of business and of local authorities, is expected to bring changes. With the aim of encouraging economic and social development, the municipalities are recommended to elaborate development programs, based on programs anticipated by the Second Five Year Plan, and on local forecasts.

49. The Government will help Municipalities to work out their programs fully by explaining to them clearly the objectives of Government's Second Five Year Plan. It will also extend technical assistance for working out the techno-economic analyses, financial schemes, etc. Town planning on a moderate-scale will be particularly encouraged by the Government, as well as inexpensive lowcost housing projects, the water supply scheme, sewerage, and others which improve the sanitary, health, and living conditions. It should be pointed out that according to the priorities established for the Second Plan period the local development programs have to be self-supporting. However, local initiative and undertakings may improve the living conditions if properly co-ordinated and managed. In fact, here is the broadest field for improvements and progress to be achieved by the efforts of the local population.

## Chapter 24

# ADMINISTRATION AND ORGANIZATION

1. Owing to the pace and complexity of the anticipated development, the implementation of the Second Five Year Plan will call for very efficient administration and for adequate organization. To speed up the development, Government will have to assume increasing responsibility for the economic and social affairs. This is the modern trend. This stresses an efficient public administration for the planning and development sectors. In addition, many institutions which already exist should be strenghtened and new ones should be established in order to adjust the present structure of public administration and national economy to the trends anticipated by the Plan.

2. Responsibility of Government Departments.- The distribution of tasks and the responsibility of the Ministries will be adjusted in order to avoid duplication of responsibilities and to define precisely the range of each Ministry. In principle, major economic and social activities will be covered by a single Ministry, and the division of responsibility for a single activity will be avoided. As regards minor economic and social activities, they will be combined according to the similarity of the scope and the development targets. However, division of work should not prevent co-operation among various Ministries when dealing with common matters. Co-ordination in procedure and action aimed at increasing the efficiency of the whole public administration should be the guiding principle in carrying out the current tasks, keeping in view the total perspective.

3. Due attention will have to be paid to the allocation of the development tasks which are to be carried out by the Ministries. With a view to acheving the targets, both in respect of their content and of time, the Ministries will work out detailed annual plans and quarterly and monthly programs with all the specifications concerning the tasks, action to be taken, and the responsibilities. The annual plans of the Ministries will have to be co-ordinated and integrated into the National annual plan which is to be approved by the Government, while the quarterly and monthly programs will be co-ordinated in respect of resources and financing. When approved, the scheduled annual plan will be the guide to all the Ministries, and a means for a preliminary co-ordination of the programs to be undertaken by the Ministries. The monthly and quarterly programs, as well as the annual plans have to be followed up in order to control the degree of implementation of the programs and plans, and to undertake further measures to fulfill the Second Five Year Plan targets satisfactorily.

4. All the development Ministries and Government Agencies will set up planning and statistical units and will elaborate the annual plans and the quarterly and monthly programs. The planning and statistical units will also be responsible for the follow-up of the

development programs and will submit evaluation reports for each planned period. The evaluation reports should be in both quantitative and qualitative terms; they should also contain the measures to be recommended for the implementation of the targets. All the departments of the Ministries will have to co-operate fully with the planning units in all the stages of preparation, implementation, and control of the plans. By the end of the current year all the Ministries, the development, as well as the administrative, will have to submit to the Government annual reports and evaluations of the achievements and failures for the year.

5. Planning, as well as the implementation of the Plan should not be of a purely administrative nature. The development Ministries should have continuous day-to-day contacts with the economic units, the social service institutions, development agencies, private concerns, etc. to assist the implementation of various programs and schemes, and to assess their intentions and evaluate the progress. On-the-spot control, encouragement and help will be the most appropriate methods of action, but without any bureaucratic interference with the responsibility and affairs of others. The Ministries and Government Agencies concerned will have to co-operate especially with the economic and social service units, because only their efficient work and progress can ensure the execution of the national targets.

6. Co-ordination of the Plans. Just as the Five Year Plan, the annual plans and quarterly and monthly programs have to be co-ordinated and integrated by the Planning Office which acts on behalf of the Government in all the technical aspects of planning. The Planning Office will prepare the respective plans and programs for the Government's deliberation; it will follow up the Plan, prepare and submit to the Government the evaluation reports, and recommend the measures to be taken by the Government in order to implement the plans in time. In all the stages of planning the Planning Office will have to consider the views and suggestions given by the Ministries and Government Agencies.

7. The Standing Preparatory Committees have extended valuable services in the course of elaboration of the Second Five Year Plan and have proved the necessity for a close co-ordination between the various Ministries. With the aim of increasing the efficiency of the planning organs and strenghthening co-ordination, there should be permanent professional co-operation between the Planning Office and the development Ministries and Agencies. The Planning Office will have to ensure the best methods and channels for co-ordination, by standard planning forms, uniform methodology etc. The technical committees, consisting of the heads of planning departments, will have to be convened by the Planning Office to consider the common technical issues related to planning. There must be continuous co-operation among all the planning organs in order to carry out properly the preparation of the plans and programs, their follow up, and all the preparatory work in respect to policy, decision, and measures.

8. The Government will consider in detail all the plans and programs submitted by the Planning Office. It will also review the progress and the evaluation reports and take all the measures needed for a successful and continuous implementation of the Second Five Year Plan. Whereas the Ministries and the Planning Office will be responsible for all the technical aspects of planning, the Ministers and the Government will bear the political responsibility concerning all the decisions in respect of planning. The Government will also inform the public concerning the progress and the problems which arise in the course of implementation of the Plan.

9. Annual Plan and Budget.- It is of paramount importance to have the annual plan co-ordinated with the State Budget, as well as with the annual credit plan. Various projects whose construction has to be financed by the Development Fund, or by bank credits, should be clearly stated in the three documents concerned, and they have to be backed by all technical details needed for their implementation. When approved by the Government and through other procedures, the Annual plan, the Budget, and the Credit plan have to be implemented by the agencies concerned without delay. The documents concerning the Annual plan, and particularly the Budget, have also to foresee the recurrent expenditures for social services, economic services, and public administration according to the tasks set forth for the current year. Simultaneously with the Annual plan, the Budget and the Credit plan, the evaluation report concerning the progress achieved in the past year will have to be submitted. The Annual plan has to make provisions for the work started during the past year to be carried over to the new, and that both the economic and social activities will be continuously carried on.

10. General Administration will also have to be improved with a view to providing the public with better services, and to creating favorable conditions for economic and social development. Various administrative matters have to be solved without delay and according to the existing laws, in order to meet in time the needs of the business population and various institutions. The efficiency of public administration should be improved and it must rely on better knowledge and higher responsibility of the public servants. It should be stressed that public administration and public servants must provide efficient service to help maintain the legal order of the State and to facilitate the economic and social life of the country. To this end the already appointed Administrative Reform Committee will have to intensify its activity. This is particularly important with regard to the timely preparation and introduction of all necessary regulations in this field.

11. Public Enterprises.- To promote the economic development and with a view to meeting the Second Five Y ear Plan targets Government will establish new public enterprises. Many existing public concerns such as the Ethiopian Electric Light and Power Authority, the Imperial Board of Telecommunications, the Imperial Highway Authority, the Cement and Textile Concerns, etc. are evidence of successful public economy. The development anticipated by the Second Plan will call for the setting up of new public or semipublic enterprises in various fields of the national economy.

12. When establishing new enterprises the Government will precisely define their field of activity, production, or business, allot the initial capital, and if necessary make provision for credits. It will also appoint the management, which will have to be responsible for all such affairs as production, marketing, profits etc. concerning the enterprises. The public and semipublic enterprises shall be autonomous organizations to be run on a profit-making basis.

The line of business and production, as well as other taks of the enterprises, will be worked out in conformity with the prospective and immediate targets arising from the five-year and annual plans. This will be, in fact, the guide to the management, to be followed and implemented bearing in mind the principle of economy. The management will be responsible for implementing the physical and financial obligations to the Ministry concerned, or to the shareholders in the case of semipublic enterprises. Physical auditing as well as supervision and control should be performed by the Ministry on the basis of progress reports to be submitted by the management, and of on-the-spot inspection. However, no interference with the affairs of the enterprises should be allowed, becasuse the management should be responsible for the success of the business both morally and financially.

13. In the course of the Second Five Year Plan, and after sufficiant experience has been gathered on the running of public and semipublic enterprises the Government will pass a Public Enterprise Act to define the tasks, rights, and responsibilities of the public concerns. The legal prescriptions should take into account both the position of the public enterprises within the national economy and the development objectives to be achieved by setting up new public and semipublic firms.

14. Social and Economic Services. To increase the efficiency of the social and economic service institutions, the Government will tend to give them autonomy in running their affairs to the utmost possible extent. Proper distribution of the targets, as well as adequate allocation of financial resources, will define the activities of the schools, hospitals, Agricultural Extension Service, Veterinary Service, Road Maintenance, and other public institutions. Within the tasks and responsibilities allotted, the management of the institutions will have to organize and perform their activity with a view to achieving the best results. Each Ministry concerned will co-ordinate the activity of all the institutions under its responsibility, extend all kinds of assistance, and supervise the work.

15. Many services provided by the public institutions are at present free of charge; if any fee for services is paid by the beneficiaries it is far below actual costs. Exception is made for some services, such as education, prevention of communicable diseases, agricultural extension service, etc. It is socially and economically justified that the beneficiaries should pay for the services recieved. With the aim of gradually introducing fees and charges for the services, studies have to be carried out as to which serviceses could be charged for, how the

charges will effect the standard of living of various sections of the population, and what benefits can be derived by transferring some services to self-supporting institutions.

16. Auditing.- In a growing economy such as that of Ethiopia, financial auditing is gaining increasing importance both in respect of managing the economy, and from the point of view of State finances. Efforts will therefore be made to improve and extend the auditing services to all the firms and institutions, and to obtain the auditing findings and reports on time. Owing to the importance of auditing, it has to be run on an objective, impartial, and purely professional basis. This is why the professional integrity of the auditing personnel should be the main criterion in extending auditing services to new enterprises. The efficiency of the auditors should be increased by permanent in-service training and by upgrading their professional ability and social prestige. To facilitate auditing, as well as to improve the conditions for planning and follow-up within the corporations and public enterprises, the interoduction of a uniform bookkeeping system will be considered, in order to introduce it gradually in the course of the Second Five Year Plan period.

17. Special attention should be given to the auditiong of public and semipublic enterprises. If public funds have to be allotted for various economic projects, and if the management has to be made responsible for running the public enterprise to the best of its knowledge and consciousness, the Nation must have a control over the utilisation of its funds and should be assured that they are properly used. Thus, auditing is closely related to the public enterprise concept, and should be a very efficient tool in maintaining the integrity of the management and in controlling [illegible]. In addition, auditing should also help the Government's endeavors to administrate the public affairs on the most economic lines. Finally, proper auditing should also make sure that the private concerns fully respond to their financial obligations towards the State and the Nation.

## SCIENCE AND RESEARCH

1. The future economic and social development of Ethiopia will greatly depend upon how up-to-date scientific and technical achievements are introduced and applied for speeding up progress. Owing to the fact that scientific knowledge and considerations have to be implemented in all economic and social activities, the Government will promote and encourage research work in all the public and private institutions so that it may contribute to the extension of modern knowledge, techniques and practices. It is by no means an exaggeration to say that not only the immediate, but also the prospective development of Ethiopia will rely basically on the feasibility and efficiency of introduction and adaption of the world's scientific resources. This is to occur during the Second Five Year Plan which foresees the economic, social, and cultural progress as closely interrelated with the progress of research and science-making it an integrated and balanced process. Whereas scientific methods have to be introduced to help the implementation of the Second Plan and the future plans, actual practice has to be surveyed and studied in order to learn what benefits have been derived, and how the future development will have to be guided in the light of Ethiopian experience.

2. It is a feature of the contemporary development phase of Ethiopia that the need to introduce and develop research and science is faced with a great shortage of research and scientific personnel. In the course of the First Five Year Plan period many new institutions have been established and entrusted with carrying out research, prospecting and other applied scientific works.New personnel had been trained both in the country and abroad to meet the growing demand in this respect, and technical assistance facilities had been provided by many friendly countries.However, the fields to be investigated and studied are expanding at such a pace, that neither the domestic institutions and personnel, nor the foreign technical assistance can cover all of them without energetic action from the research workers and the Government. In such circumstances research and scientific work have to be started in various educational institutions, research stations, Government Agencies, industries and others, and co-ordinated in order to get the maximum results from the meagre research network.

3. Although the education of technical and managerial personnel is expected to be a rather minor factor of economic and social development during the Second Five Year Plan, efforts should be made to select and train the best university graduates for research and scientific work in general. Aiming at encouraging and assisting the training and formation of domestic research workers, the Government will provide educational facilities for promising university graduates in Ethiopian institutions and abroad. It is to be expected that young Ethiopians will be more and more interested in science and applied research in order to contribute to the growth of this aspect of national development.

4. In promoting scientific development, the Government policy will be to pay due attention first to the research fields which will have immediately to assist the implementation of the national development program, and also to encourage the basic scientific work which is of a long-range nature. It is to be expected that the national development as a whole, economic, educational, social, and cultural, will gradually improve the conditions for extended scientific work, so that better opportunities will be offered in this respect. Research and scientific work which will highlight and clarify past national development, and Ethiopian cultural and artistic values will have to be promoted. Though such a broad scope of scientific development is by no means an easy task it may be gradually achieved by the efforts of all the institutions, individuals and other factors concerned.

## Development of Statistics

5. In spite of its improvement in the course of the First Five Year Plan period, the present statistical system is by no means adequate to meet the growing demands for statistical data, both by the Government and the general public. In a planned economy reliable statistics have to supply sufficient information to elaborate the plans, for their follow-up and for any kind of policy decisions. On the other hand the expanding economic activity calls for more complete statistical information because the business community as well as various Government Agencies have to rely upon accurate data when carrying out their affairs. Finally, basic statistical data are more and more needed by the research institutions for education, general information, etc. This also points to the need to improve the statistical system.

6. With a view to improving the present statistical system the Government will review the existing system of statistical information and supplement it to cover the most important fields of statistical activity in a modern country. The revised system of statistical information should consist at least of :

(i) basic statistical data concerning population, agriculture, mining, manufacturing, handicrafts, trade, commerce etc.;

(ii) current statistical data on the main economic and social activities, such as mining and manufacturing, foreign trade, investment, financial statistics, education, public health, activity of the various social institutions, etc;

(iii) current statistical data concerning price fluctuation, price indices, standard of living, etc.

The revised system should be such as to make allowance for the elaboration of other statistics needed for planning and follow-up and for applied research. It should aim particularly at providing information for national income and investment statistics, population and vital statistics, balance of trade and balance of payment statistics and others. The methods and techniques to be used for data collecting and processing should be adjusted to the existing Ethiopian conditions, to obtain the most reliable and informative statistics.

7. To promote statistical work both on the spot and in the Central Statistical Office and Government Agencies, the Government will pass the Statistical Act stating the rights and obligations of everybody concerned with regard to collecting and utilizing statistical data. The Central Statistical Office will be transferred and put under the responsibility of the Planning Board, while planning and statistical departments will be established in the Ministries and Government Agencies. Equipment and other facilities will be provided to ensure up-to-date processing and publishing of statistical data. Statistical work must be properly co-ordinated with planning, since both are part of the Government's guidance toward social and economic development.

8. Due consideration should be given to the recruiting and training of statistical staff. Field personnel have to be appointed to various regions and trained for every kind of field work, and must be supervised by adequately trained statistical supervisors. The statistical staff in the central statistical agencies as well as in Government departments has to be given in-service training, while senior statisticians will have to be trained abroad to carry through the most complex statistical tasks. Gradually, and according to the availability of Ethiopian senior statisticians, in-service training in the Central statistical agency, as well as the teaching of statistics at the University and secondary schools, has to be expanded. For the implementation of the program already stated, the Second Five Year Plan has made a provision of Eth.$ 4.9 million for recurrent expenditures, and Eth.$ 2.0 million investment for equipment. It should be pointed out that the financial resources which have been foreseen for the development of statistics have to be expanded, bearing in mind the economy in statistical work. All statistical surveys must be designed in such a way as to save to the utmost extent on personnel, financial resources, and equipment.

## pplied Economic Research

9. In addition to the surveys of current economic and social activity, evaluation reports and other forms of current economic analyses and applied economic research have to be developed during the Second Five Year Plan period. So far, economic research and basic studies are lacking in Ethiopia, particularly those which are to be available to the general public. The first study of Ethiopian economy made in 1955 (G.C.), as well as the research work done in the framework of the elaboration of the Second Five Year Plan, are no doubt a fair beginning of economic research, since they cover nearly all the fields of the national economy. However, owing to the inadequate statistical material which was used, they have to be reviewed and brought up to date.

10. Many subjects have to be studied in the coming five-year period but some of them are to have top priority. A study of national products and

their composition should have high priority. Agricultural structure, the long-term trends of Ethiopian foreign trade, regional economic development with particular reference to the availability of resources, propulsive industries and investment structure, demographic affairs should also be studied. Obviously, applied economic research has to be carried out on the basis of available statistical information, and the statistical program has therefore to be worked out in full conformity with the economic research program.

11. In addition to the basic economic research which is of a long-term character, surveys and investigation of various economic and social problems have to be undertaken. The best method recommended for such inquiries is to study the various statistical surveys to be carried out by the central statistical agency. In this respect, the study of price trends, the standard of living studies, enrollment and turnout of various educational institutions, manufacturing industry analyses etc. are particularly important. It is to be expected that basic economic research and other studies will provide sufficient material to gradually build up the theory of Ethiopian economic development, which is particularly needed for a long-term economic and social development program. An Ethiopian economic development theory is especially necessary since it must be related to its natural wealth, density of population, and other factors which are an incentive to progress.

12. Being the central agency which deals with various problems concerning the economic and social development of the country, the Office of the Planning Board will be entrusted by the Government to carry out basic and other applied economic and social research. With this in view the Government will strengthen the Office, appoint the necessary research staff, and provide the Office with the necessary facilities. Owing to the lack of experienced research personnel, the Office should organize adequate in-service training in economic research and theory for its own staff and the staff-members of other institutions. It should also publish the main findings of various studies, in order to make them available to the interested institutions and individuals.

## Other Applied Research

13. Owing to well known historical reasons the Ethiopian territory and natural resources are far from being completely surveyed and prospected. This is one of the serious obstacles to a better utilization of the natural wealth and the formulation of a suitable policy. During the First Five Year Plan period much had been added to the existing knowledge, but the vast and abundant resources of the country are not yet fully known. The Second Five Year Plan therefore anticipates very intensive research and prospecting work to be performed for nearly all varieties of natural resources. Research, surveys, and prospecting are considered by the Second Five Year Plan to be among the most important factors not only for the Second Five Year Plan development program, but also in respect to the long-term development objectives and targets. Many of the research and prospecting targets have

already been stated in the previous chapters,so that only a summary will be given here in order to emphasize the volume of the tasks, and point out the need for co-ordinated action of the various agencies which are responsible for research and prospecting works.

Technical Research

14. The establishment of technical and technological research is one of the most important tasks of scientific work to be done in the field of industrial development of the country. The contemporary technical evaluation assumes intensive investigations of a technological nature in all the spheres of production. Actually this evaluation is identical with the progress made in technical and technological research devoted to the most rational and economical utilisation of the relevant resources. It is true that Ethiopia, like all the developing countries, has the advantage of being able to apply the results of modern science when starting new undertakings. But in spite of this possibility it is necessary to accompany the industrial development with appropriate research, which has to explore at least those peculiarities of technological processes under different circumstances, which are always present.

Agricultural Research

15. Agricultural Research in the course of the Second Plan period should experiment with various varieties, methods, and techniques in the field of cultivation,cattle raising, and the introduction of improved tools and equipment.The best varieties, breeds, and types which will be selected will have to be popularized and made available to the farmers in order to increase plant production and animal husbandry.

16. In the field of plant production, scientific institutions will lay stress on those crops which are of the highest significance in the diet of the population, in supplying domestic industry, and in increasing exports and reducing imports. They are, in the first place, cereals, oil seeds,pulses coffee, cotton, coarse fibre crops, fruits,and vegetables. Experiments and investigation in this field should be so directed as to determine:

(i) the possibility of expanding the cultivation of these crops in the regions where some of them have not yet been grown;

(ii) the most effective technical methods for cultivation by applying the existing, as well as more up-to-date means of production;

(iii) effective plant protection from current diseases and pests;

(iv) the most economic technical methods of crop irrigation;

(v) the most favorable varieties of crops in respect to yield, quality of the products, resistance to diseases, etc.;

(vi) which types of modern tools and implements should be introduced in the different regions of the country, in respect of the quality and durability of material, facility and effect in use, repairs etc.

17. For the purpose of promoting animal husbandry the scientific institutions should give priority to:

(i) detailed studies to determine the existing potential of the domestic cattle in respect of productivity and the quality of meat and milk by applying a ranch-system in feeding (in actual practice this can be applied on a fairly broad basis);

(ii) further improvement of the existing potential by organize selection, or by crossing the domestic cattle with corresponding imported breeds;

(iii) determining the most suitable feeding methods and livestock management, and in relation with this, corresponding methods of preparing and preserving livestock feed for the dry period in all the important regions of livestock raising;

(iv) the creation of a domestic breed of sheep for wool production, by crossing with corresponding merino types, and at the same time improving the weight and quality of meat;

(v) studying the most effective measures of livestock protection from contagious diseases, parasites, etc.

## Geology and Mining

18. The existing knowledge of the mineral wealth and energy potential of Ethiopia is insufficient for a more intensive development and a rational long-term location of industry. This fact is an important limiting factor to the industries which depend on mineral raw materials, so that the important task of research work in this field is to remove this limitation. For this reason prospecting for mineral resources should be given a high priority and it should be set on a broader basis. It should cover a much larger number of raw materials than has been the case so far, and explore much more territory. This will put more emphasis on the execution of the basic task of prospecting, which is to obtain as soon as possible, a picture of the total mineral wealth of the country, as well as of its structure, volume, quality, and location.

19. Whereas a complete exploration of mineral resources asks for considerable funds, skilled personnel, and a longer period of time, (and all this cannot be provided in the course of the Second Five Year Plan), immediate tasks of surveying and prospecting should assist and facilitate the trend of industrial development during the Second Five Year Plan period, It should deal particularly with :

(i) raw materials for energy supply (coal, crude oil, gas, nuclear raw materials and others);

(ii) raw materials for the basic industry (iron ore, manganese, chromium, nickel, molybdenum, copper, cobalt, galena and other raw materials);

(iii) raw materials for the industry of building materials (cement raw material, quartzite, limestone, asbestos, gypsum, clay, [illegible] materials for [illegible] and [illegible] production

[illegible] for the chemical industry (salts, [illegible] and other raw materials).

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ornamental stone, and other materials for a rapid and easy production of building materials);

(iv) raw materials for the chemical industry (salts,coal,oil, sulphur, potash, quartzites and other raw material).

Prospecting for gold, platinum and potash should continue, but should not be exclusive because, regardless of their effect on the balance of payments, they cannot serve as a basis for a broad long-term industrial development.

20. Of particular significance is the prospecting of iron ore deposits in order to determine where the prospective regions for the steel industry may be found.The possibilities and conditions of exploitation should be ascertained, as well as the available supply of sources of energy. It is also necessary to endeavor to complete the exploration for crude oil, and to get information whether coal deposits with possibilities of economic exploitation exist, and if so, where.

21. Aerial prospecting as a method of exploration should be applied wherever it is possible and effective, to create a sound basis for geological exploration in the chosen regions. A fixed program for the aerial prospecting of individual regions should be worked out. The findings and results of the completed prospecting operations should be summarized and made available to all those who are interested in mining (domestic, foreign, public and private entrepreneurs)in order to join exploration with exploitation as directly as possible. This has to be supported by an adequate solution of all relevant legislative and administrative issues.

22. Water Resources.- Research and surveys of water resources should have a much more multipurpose approach during the Second Five Year Plan period. Although the abundant water resources have to be very carefully utilised to ensure sufficient water for electric power generation, irrigation, as well as for water supply to the population and future industries, it is of paramount importance to co-ordinate in time all the various uses of the water in order to achieve the best utilization of other resources, such as the land, mineral wealth, industrial potential, etc.Having this in mind all the agencies concerned have to co-ordinate their programs of water utilization properly, and to rank the priorities according to the prospective development of various regions. In addition, water power as a source of energy has to be supplemented by other sources, for which research and surveys must to be carried out in the course of the Second Five Year Plan.

23. Multipurpose Surveys of the Rivers Valleys.- During the past years great progress has been made in surveying the promising valleys of the great Ethiopian rivers such as the Awash,Blue Nile, Wabi Shebelli, and others. In the course of the Second Plan new development projects will have to be undertaken in the regions concerned, as the result of research carried out so far. The Second Plan has made provisions to continue the surveys, but it should be pointed out that the survey authorities have to co-ordinate their work with the work of other agencies involved in the

development programs in the valley regions. From the point of view of speeding up the exploitation of natural resources in the valleys it is very important to start other research schemes on time, particularly agricultural research, weather and rain measurements, surveys for road construction, etc. It is highly desirable to carry out all the research and survey projects on time, in order to reduce the period between the beginning of research and the starting of exploitation.

24. Meteorology.- Due to the small number of stations meteorological data are available only for some regions of the country. In addition, not much data have been published, so that various projects which depend on climatic and weather conditions have to be postponed until the necessary information has been collected. At present there are many places where meteorological observation might be introduced through various institutions and individuals. The Government will therefore take steps to extend the network of meteorological observations. It will provide the agency concerned with facilities to collect and publish the data, so as to ensure basic uniform information in respect to the climatic and weather conditions.

25. Mapping, which is at present carried out by several institutions and on only a partial basis, should be centralized and properly co-ordinated. Since it is a precondition of many other activities (regional and physical planning, transport planning, geological and mining research, national defense, etc.), it has to be standardized and based on a comprehensive program. This program should contain the general solution of mapping problems, viewed from the national standpoint, and has to ensure the beginning of a general mapping of the country as soon as possible.

## Scientific Development

26. The University, as well as other competent institutions, is expected to pay due attention to the development of the basic sciences. During the Second Five Year Plan period, perhaps the educational aspects of training Ethiopian personnel who will assume responsibility for further development and teaching in the sciences concerned will have to be emphasized. Mathematics, physics, chemistry, biology, and other sciences should get a higher priority at the University than they have had so far, due to their importance in the theoretical and applied fields. Whenever possible, joint schemes have to be established by a co-operation of the Ethiopian and foreign scientists, either on a bilateral basis or within the United Nations Technical Assistance Program. Individual efforts, as well as efforts of various institutions to develop basic sciences should be encouraged by the Government by appropriate means.

27. Ethiopia is a country with one of the oldest cultures in Africa and has a national continuity of several thousands of years. However, this cultural and historical wealth is insufficiently explored, and it is a duty Ethiopia owes to itself and to the world to advance basic research and information in this field. National history, national geography, linguistic studies, archeology, sociology, as well as other

subjects belonging to the human sciences and dealing with Ethiopia's past and present should therefore take their proper place in the over-all scientific development. The findings and results which come out of the research and studies,as soon as they have been scrutinized and ascertained to be scientific and objective, should be made available to the national and international public.The programs of the University and secondary and primary schools will have to include the respective findings, in order to assist the extension of the cultural values of Ethiopia to the new generation. The leading principle in developing scientific work should be that not only should Ethiopians derive benefits from cultural and scientific heritage from other countries, but they should also contribute to the world's cultural and scientific wealth.

28. The traditional way of orally transmitting knowledge and cultural values from one generation to the other can no longer meet the increasing need for science and culture. Therefore, literature on the national arts, scientific and technical knowledge,has to be published in order to preserve the traditions and develope modern science. However, it is not an easy task to implement this during the Second Five Year Plan period only. The building up of national literature in all spheres requires much devoted work through many years and decades. Meanwhile, the Second Five Year Plan as a national challenge should also encourage the scientists, research workers, etc. to contribute their share to national progress. The Government will continue to assist the publication of national literature as it has been doing in the past, but other factors are also invited to help in this national endeavor.

## Co-ordination of Scientific Work

29. The program of scientific development set out by the Second Five Year Plan, either directly or indirectly, is an important part of the overall national development. It is faced with limited human and financial resources which might tend to upset its fulfillment. In such circumstances a co-ordination of all efforts intended to expand science and research, and close co-operation among all the institutions and individuals concerned are factors to favor the anticipated development. It should be pointed out that the limitations of human and financial resources will be, to a large extent, overcome by a rational distribution of tasks, by a proper utilization of the results and findings of others, and by a mutual assistance in performing scientific development targets.

30. Of course, the Government can only partly take the responsibility for prospecting, surveys, research, and science in general by assigning the respective tasks to its agencies. The greatest part of responsibility is assigned to the University, colleges, and various educational, scientific an cultural institutions which are expected to co-ordinate their activity along the lines discussed in this chapter. To promote co-operation among the competent institutions, public, autonomous, and private, and to facilitate the co-ordination of scientific programs, the Government will sponsor the

establishment of a National Council for Scientific Co-ordination. The Council should be an independent body to bring together the representatives of all research and scientific institutions as well as individual scientists and research workers, with the purpose of encouraging and co-ordinating scientific and research work.

31. Many improvements are expected from the implementation of t.e Second Five Year Plan in the economic, social, and cultural fields in g.neral. The scientific progress which is anticipated by the Plan, not only as a consequence of social and economic growth, but also as a cornerstone of future development, should be an important asset in the next five-year plan.